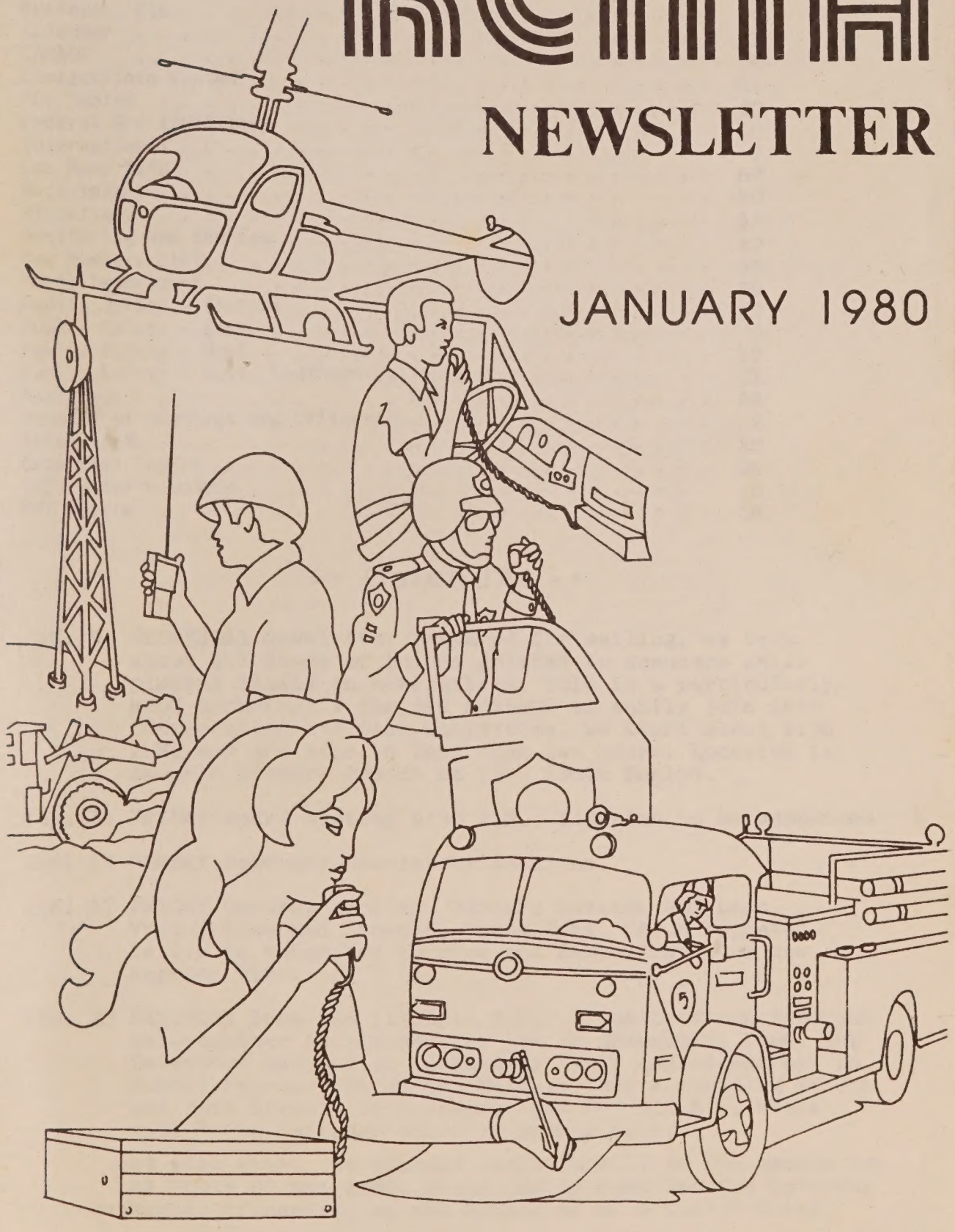
RCMA

NEWSLETTER

JANUARY 1980



FIRST NATIONAL AND INTERNATIONAL ORGANIZATION
OF MONITOR RADIO LISTENERS

JANUARY 1980 ISSUE NO. 48

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** Calendar **

JAN. 9, WEDNESDAY Newsletter prepared for mailing. We talk about all kinds of things related to scanners while placing labels on newsletters. This is a particularly good opportunity for new members to easily join into conversation and club activities. We start about 6:30 P.M. and are done in less than two hours. Location is Anaheim Library Branch at 1340 South Euclid.

JAN. 11 FRIDAY Board meeting 6:30 P.M., location to be announced

JAN. 14 MONDAY February Newsletter deadline.

JAN. 17 FRIDAY General meeting, Mercury Savings and Loan, Valley View and Lincoln, Buena Park, CA. A representative is scheduled to show and demonstrate the new Regency M100.

FEB. 23 SATURDAY Iowa and Illinois R.C.M.A. members: An informal get-together is planned for you in Davenport, Iowa. The Davenport Radio Club is holding their annual Hamfest on Sunday February 24 at the Masonic Temple Building at 7th and Main Streets in Davenport and the R.C.M.A. event will be on Saturday starting around noon.

At this time, the planned location will be the Ramada Inn at Route 61 and IS80. Rooms can be reserved for Saturday night, if needed, at the Ramada or at a budget motel,

Calendar (continued)

Excel Inn, across the street.

The recent summer meeting in Peoria was enjoyable; let's do it again plus make a Hamfest at the same time! For more info contact: Mike Ravis, 2410 W. 40th St. Davenport IA. 52806, (319) 386-7555.

(Editor's note: perhaps you can coordinate carpool arrangements through Mike. IBR)

Reports of Meetings and Officers

Highlights from the December 14 Board Meeting.

Present were all officers except Secretary Noel Robertson. John Clark and Bryan Hunnel were welcomed members in attendance. Call to order at 7:10 P.M.

Further discussion on incorporation culminated in the decision that an appointment must be made with an attorney for consultation during the week of December 17. Finalized action is required due to the new regulations effective January 1st which involve additional work in incorporation procedure.

Dates were established for the next six months for Newsletter mailing preparation at the Library in Anaheim.

Various revisions to the inside front cover are planned: a disclaimer/recommendation on taping; a tightening up of repoduction priviledges; etc.

Due to a short agenda, the meeting was adjourned at the unsually early time of 8:26 P.M.

SUMMARY OF TREASURER'S REPORT
For Period Ending December 15, 1979

Balance as of November 15, 1979			$ 1598.92
Received for membership:			
New members (91)	$ 733.47		
Renewals (44)	351.89		
Received for advertising	55.00		
Received for back issues	82.75		
Miscellaneous received	28.02		+ 1251.13
Expenses:			
December Newsletter (printing, etc.)		$ 646.07	
Postmaster (for bulk mailing account)		200.00	
Rental of room for preparation of Newsletter for mailing (6 mos.)		30.00	
Officers' & others' expenses		447.89	
Back issue printing		139.45	
Letterhead & envelopes (layout & printing)		69.90	
Miscellaneous		33.00	- 1566.31
		Balance	$ 1283.74

For a detailed report, send a self-addressed stamped envelope and one extra First Class postage stamp to: RCMA, P.O. Box 4693, Riverside, CA 92514.

Reports of Meetings and Officers (continued)

SECRETARY AND TREASURER

The February Newsletter will have the ballot for voting for the offices of Secretary and Treasurer. But first, we need members to run for these offices.

SECRETARY --- If you would enjoy 1) receiving and answering RCMA mail, 2) taking and notes and preparing minutes, 3) joining in on determining the club's direction at Board Meetings, 4) paying attention to and taking care of details and 5) if you have a reasonable command of the English language -- perhaps the position is for you. Some typing is required. For additional info about the office, call Noel (213)-965-6848 or any one of the other officers.

TREASURER --- If you enjoy keeping records and working with figures and have the habit of keeping your own personal checking account and other financial records in perfect order, this office may be for you. The Treasurer has to frequently deal with the bank, write notes to members, prepare the New Member list each month for the Newsletter and supply membership information to the Membership Chairman and to the computer label man. The Treasurer has to prepare monthly financial statements for publication and attend Board Meetings to join with the other officers to help run the club. Some typing is required. For additional info about the office, call Linda (714)-688-1168 or any one of the other officers.

Both these offices require interested, conscientious and reliable people. If you want to help the club by running for one of these offices, please speak up. We truly need your help.

THE editor's column

Iden Rogers, P.O. Box 4693, Riverside, CA 92514

NEWSLETTER PASTE-UP

Bryan (CA-OR-097) and John (CA-OR-078) will be doing most of the paste-up for this issue. If all goes well, they will take over the job entirely in the very near future. This helps me greatly.

What is a "paste-up"? It is combining all of the Newsletter input from the various column editors, Board Members and advertisers and putting it all in some kind of order with pages cut to length and numbered. The Newsletter requires lots of cutting and pasting to assemble. The finished product is the paste-up which is then is taken to the printer.

EDITOR STILL NEEDS HELP

Are there any members in the Orange County area who are familiar with club workings and would like to help me? I need an Assistant to regularly answer some correspondence under my direction and take care of other details from time to time. This person must be reliable, concerned with details and willing and able to write letters intelligibly and maybe even intelligently. If you are interested, PLEASE contact me, (714)-688-1168. Please also see page 7 of the December issue.

EDITOR SEEKS REPLACEMENT

If YOU think you could handle being THE RCMA Newsletter Editor and want to give it a try, please contact me, (714)-688-1168. I am willing to be an Assistant Editor.

THE editor's column (continued)

FREQUENCY REPORT FORM

I had hoped to complete the frequency report form for members to use when submitting frequencies but just didn't to it. Hopefully it will appear in the February issue.

NEWSLETTER MAILING COMMITTEE

If you would like to assist the Newsletter Mailing Committee once a month in the Anaheim area or if you would like to take over as Mailing Committee Chairman, please contact Jerry, (714)-772-1259.

LETTER RECEIVED

Enclosed is my $8.00 renewal for my membership. I personally would not mind paying $10.00 or more a year because it is worth the money. In my two years in the club as MI-006 and now as OR-006 I have seen the club grow from 239 members and a 9 page Newsletter in October '77 to a 64 page Newsletter (magazine) and over a 1000 members in November 1979. I call that fantastic. RICHARD WOLFE (OR-006)

(Editor's comment: This letter is typical of many that are received here. I am happy that just about every member is pleased about the club's progress and the direction it has taken. IBR)

CB MAGAZINE

From DON (CT-003): I have read with interest the comments regarding CB Magazine in recent issues of the RCMA Newsletter. I would like to examine an issue myself, however a quick check of a few greater Hartford CB stores and the local library proved fruitless. Would you consider printing the address of CB Magazine in a future issue of the RCMA Newsletter?

OK Don, here it is: CB Magazine, 531 N. Ann Arbor, Oklahoma City, OK 73127. $12.00 per year or $1.50 for a single copy. IBR

From JOHN (IL-010):
A few comments regarding club operations and the proposed R.C.M.A. Bylaws printed in the November Newsletter:

(1) Issues as important to the members as (a) Bylaws, (b) membership directories, (c) back Newsletter issues, and (d) policies toward items like sensitive frequencies should be given more notice in the Newsletter. I would suggest at least three months. Comments pro and con could thus be obtained, and the membership could even be sampled through the use of a "ballot" in the Newsletter. Let the general membership have more say in what they want and like, and let them decide if the items are worth a dues increase or more involvement on their own part.
(2) The Bylaws should recognize the growing trend toward a NATIONAL organization. Other clubs operate nationally, but with fewer "on-site" board meetings; they rely instead on close correspondence between officers.
(3) The Bylaws should provide for removal of officers and/or recall if they become delinquent in their duties.
(4) The definitions of the jobs of officers should include mandatory participation in Newsletter preparation. A prospective officer should be prepared to write or edit a section and/or participate in Newsletter production.
(5) The organization should provide a minimum "salary" to the Managing Editor to offset the substantial--but very important and essential--time that really keeps us 1000 members together; there is no more important job than that of an effective Newsletter editor. (I con-

sider Iden Rogers' work to be excellent; everyone should help him and his concept of individual column-editors as much as possible.)

(6) Newsletter back issues and special publications can be important revenue generators as clubs like the International Radio Club of America can attest. Perhaps a "Publications" subcommittee should be created to look into the "reprints" question further. Also, why not print more issues as "extras"? This would certainly be less expensive in the long run--if adequate cash flow can be maintained.

Editor's response: It would be easy to respond at length to this but I'll try to be brief, which is not one of my better talents.

1) Members at large are encouraged to become involved in club affairs. The problem is not that we are restricting members from participating but instead that we cannot find enough members who want to participate. A letter such as this one expressing interest in and concern about club affairs is rather rare and certainly welcomed.
2) Bylaws --- The Bylaws printed in the November issue are entitled "Interim Bylaws". Previous to this, the club had no real official club operating policies and procedures. These are intended to serve only until a more complete and refined (and no doubt more lengthy) set of Bylaws can be drafted and presented to the membership for comments and approval. We (the Board) clearly recognize that the "Interim Bylaws" are inadequate and incomplete --- but at least we have something! The problem is in finding volunteer help to get the job done.
3) Regarding offering pay to the club's hard workers --- presently we do not have the money. The October, November and December issues were over-budget. We now hire a printer and the next one I would like to see hired is a part-time non-member professional bookkeeper to maintain club financial records and work under the direction of the club Treasurer. I feel that this is important. Hypothetically, if the club could afford a few hundred dollars a month to pay me for the hours I put in, it would not change things much because I don't really have the time either with pay or without pay.
4) A number of other ANARC clubs conduct their business and run their clubs even though the club officers are geographically separated. I have often wondered how they do it. My conclusion is that the other clubs are not growing like ours. We announced crossing the 1000 mark in the November issue and we will be very near the 1200 mark by the time this is read. Our publication is growing and changing. The other clubs usually have the same number of pages and the same columns month after month. They have fewer adjustments, changes and problems and what they do have can be worked out between the officers via phone and mail. RCMA, with its Southern California based officers, is very possibly not utilizing willing and qualified talent from other parts of the country but it's hard to picture how we could make it work when our monthly Board meetings run from 2-4 hours of no-nonsense club business. We solve problems by face to face personal interaction that would take forever to work out in the mail or be very costly on the phone. I think all the present Board Members would be delighted to have Board Members in other states if we could figure out how to make it work <u>for us</u>.
5) Back issues: The Board recently agreed that we want to resume offering them <u>when</u> we can do it efficiently and without overburdening volunteer help. Also, previously they were priced on a break-even basis and when they are again offered they will be priced higher so that it will serve to be a money-maker for the club.

Beginners ??? Corner

Have a question? If you are a new scanner listener and don't understand something about monitoring that most everyone else seems to understand, send in your question. When possible, your question and the answer will be printed. No answers will be sent by return mail. Your name will not be printed. Write to: David E. Crowley, 7234 Balson Ave., University City, MO 63130.

My name is Dave (MO-009) and I'm delighted to be able to help out newcomers by answering any questions you may have. I was also a beginner and there were plenty of things I didn't know until I asked someone or found the answer in a book or magazine. If I am stumped by any of your questions, which may well happen, I'll find the answer or, if necessary, refer your question to another editor.

I have been listening actively to public safety radio since 1957 when I acquired a tube-type Monitoradio (now Regency) tunable FM receiver for the VHF-low band (30-50 MHz). I didn't know the difference between VHF-low and high bands then, so about all I heard in rural Vermont where I went to college was the state police network. (The difference between the VHF low and high bands is a good beginner's question, for instance)

I have also been a fire buff since childhood, but my attempts to pick up fire calls on tunable multi-band portable radios were not particularly successful, since I didn't know how closely the stations were spaced nor exactly where they were allocated.

My first scanner was a Radio Shack VHF Hi-Lo crystal controlled pocket model. The salesman began my serious education in monitoring and provided me with my first frequency list. The publications which helped me at first were Radio Shack's Realistic Guide to Police, Fire and Aircraft Radio and Sams' How to Hear Police, Fire and Aircraft Radio by Len Buckhalter and, of course, the Police Call directories. By now I have accumulated a small reference library including many government publications dealing with various aspects of FM two-way radio communications. When I answer questions in this column, I'll mention the books I use so you may start your own collection.

University City, where I live, is immediately adjacent to St. Louis, MO. and approximately at the center of a large metropolitan area affording a fairly crowded radio spectrum and many interesting agencies and services to listen to.

Please don't be shy about asking questions, even if they seem stupid to you. Your name won't be mentioned so you can enjoy complete anonymity. I look forword to your questions and to what I am sure will be a shared learning experience.

Beginners tip for the month: Emergency Medical Services Communications System Technical Planning Guide Stock No. 003-000-00547-0 $5.50 U.S. Government Printing Office, Washington, D.C. 20402. This book contains a wealth of information, not only about EMS, but about public safety radio in general, all written in fairly non-technical language for public administrators.

International

Richard Stein, Editor

This column is for reporting two-way communications frequencies above 30 MHz, radio system details, monitoring experiences and any other information relating to monitoring in countries other than the United States and Canada. Send to: Richard Stein, 456 Barrymore Pl., North Brunswick, NJ 08902.

Individual letters have gone off to each of our international members in the hope that they will be able to provide some information for this column. I would like to thank those members who have sent information and articles thus far.

The following list of interesting frequencies for Baja California was submitted by Walt- CA-OR-129:

BAJA OFF-ROAD RACE FREQUENCIES

146.790 XE2BCM State-wide repeater
146.520 XE2BCN State -wide simplex
154.600 "Ensenada" Start/finish simplex
154.570 "Ensenada" Start/finish alternate
122.800 "Angel" Aircraft rescue

All radio licenses are issued annually by the Secretary of Communicationa andTransportation, Mexico City. The same frequencies are used by the race organizers in the U.S.A., using amateur radio call signs. The repeater is located on Mt. Diablo, B.C.N.

Occasionally, individual checkpoints may use "secret" simplex frequencies for intra-check point use. This is especially used around San Felipe and Mexicali. 3880 KHz is also used.

Skip reception is very good and with it comes foreign stations as evidenced by the many reported Spanish, Portuguese and French language loggings. But by far, the most interesting foreign station receptions have been those emissions in Russian received here on the East Coast. I've logged these Russian stations on a number of frequencies and early-on began to tape and accumulate the best pieces of reception. My hope was that they could be translated and we would have some idea as to their origin.

I'm very fortunate, I have Russian friends who are willing to help. Boris and Yelena are recent immigrants whose knowledge of English has gone from nothing to very good in the past eight months and they have assisted me in translating some Russian teletype messages received on short wave much to my delight and their interest, When I asked them for more help, they were happy to assist again. I don't think they really understood what I had taped and I certainly had only the slightest hope of being able to ID anything. What we found was amazing. (See listing at end).

I had about fifteen minutes of accumulated reception and had hoped to be able to go through the whole thing in 30 minutes But the more they heard, the more involved they became and the more they wanted to be able to decipher the content of the messages. At first, Boris felt that the messages were coming from a cargo ship to a Russian embassy here in the States. Yelena, who is an Electrical Engineer with a specialty in radio, said no. She was right, of course, and Boris agreed when the message came from the Ministry of Food Production about a change in a meeting date. They shook their heads in amazement as they listened, not believing that radio transmissions at these 'gertz' (i.e. hertz- radio frequencies) could be received here as cleanly and as sharp as the recorder played out. "These are closed frequencies- special use systems. Radios are used only for governmental business, some special businesses and taxis in the Soviet Union. You can't tune them in on our radios. Use is generally restricted to short range communications within a plant or office, and yet we are listening to both bases and mobiles (from the taxis) with low power so many thousand miles away. You should send Breznev a copy of the tape. I'd bet he'd flip." They laughed as they listened to vulgarities voiced by an annoyed female taxi dispatcher looking for her cabs and then they tried to decode a short military message.

Boris's detective work proved unfailing as he identified the taxis near the city of minsk by license plate number, a port operation in "White Russia" (Byelorussia) by the speaker's accent and some Ukranian, a military message preceded by alerting tones to a unit on the Western border with Poland and various ministry calls and official's chauffeurs by the "clean and easy Moskovite Russian" accent.

This is truly exciting monitoring. My hope is that this peak will last for a while so that we can extract more information and then be able to present it to you.

I have logged Russian on the following frequencies

33.900 36.230 36.275 37.025 40.140 42.750

Best time has been 1400 GMT to 1800 GMT. The above frequencies may not be the actual output frequencies of the Russian stations. Many signals have been received mixed with signals from other countries. There is the possibility that the original Russian signals have keyed other repeater systems along the way and have been sent out on the output frequency of the keyed system.

40.140
PTA: a port in the southern part of Russia, prob. "White Russia" based on the 'not-clean' Russian accent. Manifest lists of automobiles, quantities, order numbers, and a good number of radio checks. Base was "Alpha-45" talking to other "Alpha" units.

37.025
Ministry of Food Production, probably Moscow, notification of a change in meeting date and time.

International (continued)

Taxi cabs near the city of Minsky determined by the car's call number based on the license plates. Base and mobiles both heard clearly.

Construction site base offering a truck with a fresh load of mortar " of a good consistency".

Ministry chauffeurs talking between cars, and between a base and cars, PTA: Moscow.

Military message preceded by alerting tones: "Center" wkg "Visula (Vistula)" and "Zator-1"- PTA: Poland border near Vistula River.

Call from one plant to another- 'how many floor tiles did you receive this week?'.

This column is for reporting Public Safety and Special Emergency frequency information, radio system details, radio codes, dispatch areas, unit numbering systems, etc. for police, sheriff, fire, forestry (except USFS), fish and game, highway patrol, state police, prisons, prisoner work camps, local government, highway & street maintenance, port authority/bridge maintenance, animal control, ambulances, paramedics, hospitals, life guards, ski patrol, search & rescue, flood control, civil defense and disaster organizations. Input and questions for this column must be sent to the proper regional Public Safety editor listed below.

PUBLIC SAFETY - EAST

Send Public Safety and Special Emergency frequencies, radio system details and questions for Connecticut, Delaware, District of Columbia, Florida, Georgia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Vermont, Virginia and West Virginia to: Richard Barnett, P.O. Box 428, Newton Highlands, MA 02161.

Now that the snow season is once again upon us, we northeasterners can gleefully gloat over the truly outstanding public safety monitoring which accompanies winter in the larger cities. Let's face it you membership majority out there in California, you just don't have the exciting possibilities we have from Chicago north and east! Sure, forest fires are nice but they don't even closely match up with freezing rain, strong winds and deep snow. Not only does the northeast have its share of forest fires and blizzards, but we also are prone to hurricanes and tornadoes; public safety extravaganzas which most never have the chance to monitor. I know this sounds pretty morbid, but face it, we scanner nuts -although never wanting anyone to be hurt- just love disasters.

I've noticed something very interesting while writing this column which should interest all of my readers. It seems that the more I write about a particular section of the eastern region the more data people send in concerning that very same area. Because Chuck and a few others sent in some excellent material on the state of Maryland which I have been printing over the last few months, more and more members in that area ad-

vise me of updates and additions to the information. Thus, if you wish to learn more about your particular region you should send in the best report that you can so that others near you can expound upon your data.

Before I get to the frequency lists I just want to mention that Bill Baus of Massillon, Ohio is desparately looking for information on the Stark County Rescue system near Akron, Ohio. Mr. Baus is in need of in-depth info for the Canton and Akron areas and would appreciate members' responses. Below is some material he will find of interest.

From JERRY (OH-015):

OHIO STATE HIGHWAY PATROL RADIO CODES

1.	Out of service	2.	In service
3.	Out of service, subject to call	4.	Out of svc.; equipment failure
5.	Rush	6.	Reference previous traffic
7.	At your convenience	8.	Unable to read, change location
9.	Unable to answer at this time	10.	Call given point by phone
11.	Call H.Q. by phone	12.	Call you D.H.Q. by phone
13.	Call your post by phone	14.	Call radio by phone
15.	Call home by phone	16.	A; tech. problem w/fnctnl. port.
16.	B; tech. problem with computer	17.	(none given)
18.	Have traffice relay	19.	Relay by phone
20.	Contact given place in person	21.	Contact G.H.Q. in person
22.	Contact D.H.Q. in person	23.	Contact post in person
24.	Contact radio in person	25.	Contact home in person
26.	Contact dispatcher in person	27.	Improper procedure
28.	Car or post go signal #2	29.	Relay in person
30.	Accident...Reported fatal	31.	Accident... Reported non fatal
31.	A; Accident personal injury	32.	Traffic or road blocked
33.	Drowning	34.	Fire...Motor vehicle
35.	(none given)	36.	Fire...Other than a motor vehicle
37.	Stranded vehicle	38.	Eating
39.	Advise location	40.	Emergency
41.	Immediately	42.	Be on station
43.	All units call your post	44.	All units report to your post
45.	Resume regular patrol	46.	F.C.C. Inspector on station
47.	Traffic preference	48.	Stand in examinee
49.	Forced landing	50.	Unidentified plane
51.	Plane Crash	52.	Plane crashed, pilot bailed out
53.	Plane in trouble, will crash	54.	Wrecked truck hauling explosives
55.	Explosion	56.	Train wreck
57.	Bomb scare	58.	(none given)
59.	Permit traffic	60.	Convoy
88.	Officer in trouble...need assist	98.	Wanted person
99.	Wanted person or property		

Thanks Jerry for that interesting list -especially code #46! Jerry also mentioned a couple of frequencies that weren't regularly listed: Mt. Vernon Support team on 154.385 and Knox County Squads channel #2 on 33.960.

From Thomas (RI-003):

RHODE ISLAND - State Police

Frequency 1:	General Use -North Zone-	(all "X" units)	KTL542	154.935
Frequency 2:	General Use -South Zone-	(all "K" units)	KTL541	154.905

Public Safety - East (continued)

"	3: Tactical frequency #1	KTL541-2	155.445
"	4: Detectives	KTL541-2	155.505
"	5: Vehicle Information	KTL541-2	155.610
"	6: Tactical frequency #2 (not very active)	KTL541-2	159.150
"	7: Portables	KTL541-2	154.695
"	8: Emergencies (local coordination also)	KTL541-2	155.190
	Intersystem (New England Wide)		158.970

Stations:

X1 - Headquarters, Scituate
X2 - Scituate Barracks
X3 - Chepachet Barracks
X4 - Lincoln Barracks
— — — NORTH ZONE

K1 - Portsmouth Barracks
K2 - Wickford Barracks
K3 - Hope Valley
K4 - Howard Barracks
SOUTH ZONE
-BOTH-

State Police Radio Signals:

Signal 1. - Call Barracks
" 2. - Return to Barracks
" 5. - Accident
" 6. - Do not Transmit
" 8. - Clears Signal 6
" 10.- Hit & Run
" 15.- Hold Up
" 20.- Stolen Car
" 30.- Missing/ Lost person
" 50.- Drunken Driver

RHODE ISLAND DEPT. OF NATURAL RESOURCES:

31.540 - Law Enforcement (Park Police)
31.620 - Forestry Fire Channel (also has capability of transmitting on local Fire Department freqs.)
31.740 - Ch. #2 (seldom used , only when heavy traffic on 31.62)

CALL SIGNS: -locations-
KCA475/ KCO361 - Scituate
KCH722/723/727 - Providence
KYK508 -Scituate
KDN922 - Glocester
KCO360 - S. Kingstown
KET219 - N. Kingstown
KCO359 - N. Kingstown
KDN921 - Richmond
KET218 - Burriville
KCB375 - Exeter

R.I. DEPT. OF NATURAL RESOURCES:

Signal 1.- Report to ... in person
" 2.- Call...by phone
" 3.- Closing time in 15 min.
" 30- All clear, fire out
Signal 31- Smoke, Fire under control
" 32- Fire
" 33- Fire permit
" 34- Illegal fire
" - Plane crash
" 55- Weather forcast
" 77- channel for fire messages

10-3 Affirmative
10-12 VIP's Present
10-30 Violation of FCC rules
10-41 Switch to Channel 2
10-42 Out of Service at home
10-97 Arrive on scene

OTHER RHODE ISLAND AGENCIES & DEPTS:

Highway Department - 47.220 47.340
Highway Department - 47.340
Civil Defense - 45.440
Prison (ACI) - 39.280
Medical Center - 155.40 (IMH-Gen.)
Medical Center - 33.060 "
Airport Authority - 154.995
R.I. Public Transit- 30.660

From JOHN (PA-019):

I'd like to comment on the freqs. supplied by Eddie NY-041 about NYPD & NYFD. Many years ago NYPD operated adjacent to the AM broadcast band. It could be heard by private citizens for hundreds of miles. Increased demand of radio air time necessitated use of numerous fairly secure frequencies in an uncluttered band. Initially assignments were in the 151MHz band. Interestingly this was out of the range of most tuneable radios which covered 152-174MHz. I don't know if this was done to prevent interception. Later expansion gave them freqs. in the 154, 155 and 156 MHz bands.

Public Safety - East (continued)

Eventually NYPD decided to move to UHF. At one time they were to use UHF only, I don't know if they changed their minds. They are, however, licensed to have all their operations on UHF. They planned to make the transition in degrees. The frequency list supplied by Eddie was probably accurate at the time he acquired it. It is unkown to me if it is dated or simply will remain that way. There are many other special purpose frequencies not listed by Eddie. When conditions are right I hear UHF NYPD channels. NYPD Emergency squads are heard on 154.535 (editor's note: this seems to be off) and 154.640MHz.

In Eddie's list of FDNY he did not mention that Staten Island fire dispatcher shares 154.190 with Bronx. In New York fire ground operations are heard only near the fire on separate walkie-talkie frequencies. Unit to unit messages are not heard on borough frequencies.

From THE EDITOR (of PS east): I'd like to thank John for that informative response to my request for clarification in the November newsletter. If New England area members are interested in starting to have our own meetings like the Oregon and Illinois chapters please contact me immediately with your phone number!

PUBLIC SAFETY - CENTRAL

Send Public Safety and Special Emergency frequencies, radio system details and questions for Alabama, Arkansas, Iowa, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Nebraska, North Dakota, Oklahoma, South Dakota, Tennessee and Texas to: Mike Redman, P.O. Box 1177, St. Charles, MO 63301.

Send material and questions for Illinois, Indiana and Wisconsin to: John Arendt, 327 Boulder Hill Pass, Oswego, IL 60543.

Greetings as we begin a new year with this portion of the RCMA Newsletter! May this new year be as prosperous for you as we hope it will be for the RCMA. Many thanks to all who have written and sent material. Hope to hear from more of you this month. I am hoping to have an RCMA Spring Festival here on April 12, 1980. More on this next month. Mark your calendar!

IOWA

Thanks to MIKE (IA-011) and RON (IA-010) for this information: In 1978 the Iowa Department of Public Safety implemented a new statewide communications plan, switching from low to high band VHF radio. All equipment features tone-squelch to prevent accidental repeater activation, on the department's numerous base stations, 900 mobiles, and 9 aircraft. All mobiles have a Bearcat 210 installed to monitor local city and county departments. Communications are divided into three basic areas/frequencies, with each area having a Department of Public Safety Base and a Law Enforcement Assistance frequency. Each communications 'area' is found three places in the state with each repeater pair controlled by a separate tone- this actually makes for 9 separate radio systems. Actually, this is easier to understand if you have a repeater/area location map of Iowa, and these are available for a self-addressed stamped envelope and one extra 15¢ stamp for printing costs from Mike Scheel (IA-011), 3403 Jersey Ridge, Apt. 274, Davenport, IA. 52807.

The Public Safety Base frequency is used for normal contact; the Law Enforcement Assistance frequency is used for assistance to cities and counties within a communications area.

Public Safety - Central (continued)

Also available is the AIR frequency, 155.505 Mhz.; Mutual Aid, 155.475 Mhz.; car to car, 155.430 Mhz.; and here are the Public Safety and Law Enforcement frequencies by area:

Area	DPS(B/M)	LEA(B/M)
1.	155.640/154.650	155.790/154.770
2.	155.655/154.755	155.685/154.890
3.	155.565/154.665	155.700/154.800

All of these are repeater stations activated by the proper tone. Here is the County Sheriff's plan on the Iowa State Police statewide system:

Channel	Use	Frequency	System
1.	Mutual Aid	155.475	B/M
2.	LEA (as above)	varies	Repeater
3.	County Operations	varies	B/M
4.	County Information	varies	B/M
5.	Portable	155.850	Hand Held
6.	Car to car	155.910	Mobiles

While channels 1, 4, and 5 are standard statewide, channel 2 varies as to the 'area', and channels 3 and 4 vary from county to county. Here are some of the channel 3 and 4 designations:

County	Frequency(DPS-3)	Frequency(Info-4)	Call Sign
Cedar (16)	154.725	155.250	KAJ320
Clinton (23)	154.965	155.520	KAA948
Dubuque (31)	154.860	155.310	KAM681
Jackson (49)	154.860	155.310	KAF497
Jones (53)	155.190	(none)	KAE697
Muscatine (70)	154.830	155.310	KSM228
Scott (82)	156.210	(?)	KOU255

The numbers after the county name are the prefix of their radio designator units- Scott County car 5 might be 82-5. 155.595 is used for the Iowa Department of Conservation.

ILLINOIS

Mike (IA-011) has also provided this information on the Rock Island Illinois area, known as RI-COMM (Rye-comm):

Channel		Frequency	Type	Call Sign
Quad City Net		155.370	B	KSB315
Rock Island City PD		155.610	B/M	KSB315
Sheriff	input 153.815	159.150	R	KBA284
County Liaison		154.980	B/M	KDD967
Unknown use		154.815	B/M	
Unknown use		155.715	B/M	

(Anyone have any ideas about those last two??)

Sheriff (Low Band)	39.460	B	KSE204
Sheriff (Low Band)	39.500	B/M	KSE204
Sheriff (Low Band)	39.660	M	KSE204

Ri-Comm Sheriff Car Codes

Charles 11+	Andalusia PD	Mary 81+	Port Byron PD
David 21+	Carbon Cliff PD	RI-02+	Rock Island Co
Edward 31+	Coal Valley PD	RI-CD-1	Rock Island CD
George 41+	Cordova Marshall	RI-CD-2	Rock Island CD
Henry 51+	Hampton PD	RI-1	Co. Sheriff
King 61+	Hillsdale PD	1-J-00	Ambulance

Specific RI-Comm Codes

Code 1	Lights only	Code 4	Stopping vehicle
Code 2	Lights/Siren	Code 5	Radar
Code 3	Residence		

Illinois State Highway Radio Communications System

This time of year, your local highway or street department will surely make for interesting listening. TOM (IL-030) has provided this information on the Illinois Highway Department:

District	Location	Base/Mobile	Mobile/Mobile	Tone	Call
1	Schaumberg	47.30	47.38	A	KSI753
2	Dixon	47.14	47.38	A	KSI755
3	Ottawa	47.14	47.38	B	KSI756
4	Peoria	47.30	47.38	B	KSI757
5	Paris	47.34	47.30	A	KSI759
6	Springfield	47.38	47.30	A	KSI760
7	Effingham	47.38	47.30	B	KSI762
8	Fairview Hts.	47.34	47.30	B	KSI763
9	Carbondale	47.30	47.38	A	KSI764
10	Chicago	150.995	156.120		KSJ281

Tones are A- 110.9, B- 123.0; as shown.

Radio Call Numbers

The first digit is the district number; other three below:

100	Pool	300	Materials	500	Construction
200	Maintenance	400	Traffic	900	District Engineers

A microwave link connects each base station site with its headquarters facility. Mobile to mobile communications ranges from 15 to 20 miles. Radios are such that both the base/mobile and mobile/mobile channels can be 'scanned'. At the Springfield Administration Building is "Station 1"; a 'central control' type of station. "Station 1" provides the extra dispatcher in case a district dispatcher is away from his radio, coordinates weather and highway information, handles administrative traffic, and can directly contact each base station and the entire 2500 unit fleet. At night, "Station 1" assumes statewide control. Two statewide maps are maintained there: one for road conditions which would reflect less than normal traffic patterns, and a "10-13" map used during the snow control season. Phone patch capability is also included in the system. Each district has several low power base stations on the mobile to mobile frequency. Ten codes are the usual variety. During winter snow conditions, two twelve hour shifts are used- "A"- 7:30 AM- 7:30 PM, and "B"- 7:30 PM- 7:30 AM. "Snow Routes" are assigned, each 25 to 30 miles in length. These are divided into primary and non-primary routes, depending upon the priority. So, the next time snow is falling, pop in the crystal (or punch it into your programmable) and start listening! While it was not possible to reproduce the district maps here, you can get a pretty good idea of which district covers your area by checking locations on the district chart and then listening for a familiar highway or road. Now, it's time for John...

CHICAGO AREA SUPPLEMENT

Greetings from IL-012. With the introductions being completed, it's time to shift into nigh gear.

Mike Yanul (IL-014) and Mike Perlman (IL-044) have both supplied identical articles about a controversial 800 MHZ portable radio purchase by the Chicago FD. The radios in question - 80 Motorola #MT-500 hand-held portables.

At the time when purchase arrangements were being made (Nov. 78), the city of Chicago was purchasing large amounts (multi-million dollar estimate) of radio equipment from Motorola.
The radios in question were to be issued to division marshalls, deputy chiefs, and special units as a tie-in to the new "Computer Aided Dispatch System" which is still in completion stages. (Early Newsletters have had stories on the Chicago PD 800 MHZ changeover.) Additional radios were to be purchased later.
The portable radios in question recently received FCC "Type approval" but do not meet radiation standards. (OSHA - rather than the FCC - sets these standards.) The major two-way radio manufacturers are all aware that these radios emit radiation in excess of current federal standards. Attempts to lower radiation by reducing power output mean reduction in range and effectiveness and could render the radios less desirable or possibly impractical for prospective users.
An earlier purchase arrangement (June 1978) for these controversial units by the Bristol, CT P.D. resulted in substitution of existing 150 MHZ equipment when FCC type acceptance language did not appear in the contract.
The Chicago controversy has resulted in future competitive bids for purchase of 800 MHZ portables. (Motorola was favored by earlier "CADS" specs - no other bids). A Federal grand jury investigation has begun regarding possible improprieties in connection with the multi-million dollar purchase arrangements between Motorola and the city of Chicago. Chicago PD officials have flatly stated that radio equipment "safe for personal use" will only be purchased.
Controversies still exist regarding 800 MHZ radiation. ("Soft" radiation which is nonionized and focused toward the center of the head versus "hard" ionized radiation given off by X-rays, cobalt, or nuclear devices.) Federal standards are currently under review for possible changes. (Reduction of current standards by a factor of 10 could be possible.) 800 MHZ radiation studies have already been conducted by Motorola's own technical staff (back in 1977) and by an independent researcher for the National Association of Police Communication Officers.
NOTE: Chicago PD has 800 MHZ equipment installed in 140 squad cars for computer terminal purposes, but has no plans to use 800 MHZ portables for voice purposes. (The present 460 MHZ voice system will be retained).

(The article was written by Michael Zielenziger and Philip J. O'Connor and appeared in the Sept. 30, 1979 Chicago Sun Times)

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ILLINOIS STATE POLICE

District 16 Pecatonica 42.440B, 42.720M KSF947, KXM412 (Omitted from November 1979 Newsletter)

INDIANA

Dave (IN-002) has supplied the following information about the Indiana State Police:

VHF - Low Band Frequencies

SP Lowell (Dist. 13)	All Operations	B/M 42.12
SP Statewide (exc. Dist. 13)	Car - Base	M 42.26
SP Statewide (exc. Dist. 13)	Disp./Car-Car	B/M 42.42

Public Safety - Central (continued)

NOTES: 42.16 MHZ not presently used. All I.S.P. bases and mobiles have 42.12 MHZ capability - but Dist. 13 has exclusive use at this time. The 4-frequency VHF-low band arrangement is subject to changes. Plans are being made to change to a statewide 4-frequency system (no new frequencies - just different utilization of existing frequencies).

UHF Frequencies

Only limited operation of 453 MHZ repeaters is being conducted at present, as most operations have been transferred to microwave. 453.250 is a new frequency for radio and tower maintainence (simplex-mostly low powered portables).

Corrections & Additions to "Police Call"

Dist. 13 is at Lowell - not Schereville. Dist. 22 is Ft. Wayne. Dist. 24 is Pendleton. Dist. 52 is Portage. Dist. 34 is Putnamville. Dist. 51 is also at South Bend. Dist. 44 is also at Indianapolis.

From JEFF (IN-00?):

155.160	Lifeline Search & Rescue (Statewide), Hq.-Monticello
155.160	Ross Ambulance Service (Scott/Jackson/Pulaski Cos.)
47.50	Nationwide Explorer Search/Rescue
155.025	Indiana Statewide Civil Defense
159.240	Indiana Statewide Dept. Natural Resources

TEXAS

Nothing yet from Texas. Why? A close friend in ElPaso would like Police/Fire/State Police channels and usage for ElPaso and the neighboring areas. Can anyone help?

LOUISIANA

New Orleans Police Department; From ERIC (CA-LA-045):

Channel	Frequency	Area	Usage	Location
1	460.025	1	Dispatch	"French Quarter"
2	460.050	2	Dispatch	"Carrolton" west area
3	460.100	3,7	Dispatch	unconfirmed
4	460.125		car-car	Citywide
5	460.200	5	Dispatch	unconfirmed
6	460.225	6	Dispatch	"Garden district"
7	460.300	4,8	Tactical	Special Operations
8	460.325		car-car	also computer access

Patrol unit designators consist of a number prefix of the district, followed by a two-digit number noting the beat.

New Orleans Fire Department; from TOM (LA-003):

Channel A	453.150	Teleprinter, Paging, backup dispatch
Channel B	460.575	Voice Dispatch (KWJ304)
Fireground 1A	460.600	Fire scene operations in the simplex mode, districts 1,3,5,7,9
Fireground 2	460.625	Fire scene operations in the repeater mode, districts 2,4,6,8
Fireground 2A	460.625	Fire scene operations in the simplex mode, districts 2,4,6,8

The system uses Motorola 5 watt portables and 70 watt mobiles. Repeaters are provided from the fire alarm center's 320 foot tower, or vehicular repeaters in the district chiefs' cars.

Public Safety - Central (continued)

There are three separate units on apparatus- channel A monitor, channel B monitor, and 5 channel radio for all frequencies. District chiefs' cars also have mobile teleprinters. With the unique monitoring system, apparatus can receive messages whether sent in simplex or repeater mode. All fire stations monitor channels A and B, and have a teleprinter. Paging activates the individual house receiver. This new system is a vast improvement over New Orleans' prior 2 channel VHF system.

That's it for this month; now it's your turn to send in something- contributions, letters, or what have you. Unless I hear from you sooner, I'll look forward to seeing you all next month!

PUBLIC SAFETY - WEST

Send Public Safety and Special Emergency frequencies, radio system details and questions for Alaska, Arizona, California (except 7 Southern California counties), Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming to: Lyle Galdiera and Bob Gehri, 3205 SW Corbett, Portland, OR 97201.

Send material and questions for the Southern California counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, San Diego and Ventura to: Eric Christensen, 2360 Brentford Rd., San Marino, CA 91108.

Well hello there and welcome to another addition of the Public Safety West column. Bob and I would like to appolgize for not getting a column in for publication last month. There was an apparent lack of communications and neither of us had an understanding of what the other was to do. At any rate, we've got lots of information for you this time around so let's get to it...

ARIZONA

ERIC (AZ 003) offers information from the city of Tucson...

PD	Citywide investigation	Channel 5	Mobile	156.030	
SO	Car to car & dispatch	Channel 1	BM	155.040	KQB402
SO		Channel 1	R	155.050	
PD	South side Sector 1	F-1		155.010	KOA255
PD	North side Sector 2	F-2		155.730	
PD	Central City Sector 3	F-3		154.725	
PD	East side Sector 4	F-4		155.490	

Tucson PD Unit Numbering System

4:Team or Sector U:type of unit 5:area of responsibility

Type of Units

A: One man patrol B: Two man patrol C:Community service officers (teenagers)

S:Dog unit (S-1/Sergeant) SP:Special problems-overlapping crimes

W:Foot officers walking beat downtown U:Field sup. or Sergeant

L:Team commander or Lt.

UNIV	U of Arizona PD	BM	155.670	
UNIV	Pima Comm College PD	BM	453.225	KMO770
PD	Tucson Intl Airport PD & Fire	BM	453.450	
AMB	Kords-dispatch	BM	155.175	
AMB	Associated-dispatch	BM	37.900	
MED	Dispatch-countywide	BM	462.975	
SR	Pima County-dispatch	BM	147.460	
SR	Pima County-dispatch	BM	155.955	
SR	Southern Arizona	BM	155.160	

The following freq's are no longer in use in Tucson

SO	Dispatch	Channel 1	BM	155.565

Public Safety - West (continued)

MED	Dispatch (has been replaced by 462.975)	BM	155.220
UTIL	Tucson Electric Power	BM	153.470
UTIL	Tucson Electric Power	BM	153.725

CALIFORNIA-northern

From JAY in Sacramento (CA-SA-004)

SO	North patrol	Channel 1	453.900
SO	Records	Channel 2	453.250
SO	South patrol	Channel 3	453.575
SO	Car to car-simplex	Channel 5	453.475
PD	North & downtown	Channel 1	460.050
PD	South patrol	Channel 2	460.200
PD	Detectives	Channel 3	460.325
PD	Records	Channel 4	460.475
PD	Tactical	Channel 5	460.425
PD	Emergency	Channel 6	460.275
HP	Cal Hwy Patrol Base	Gold	42.120
HP	Cal Hwy Patrol Mobile	Gold	42.200
FIRE	Sacramento County		154.190
FIRE	Sacramento City		153.890

NOTE: The Sacramento helicopters in the area are STAR 1 (day shift) STAR 2 (evening and night shift). Both are sheriff's choppers and are or will be on all sheriff's frequencies.

STAR-Sheriff's Tactical Air Reconissance

The CHP helicopter is Helicopter 7 which uses all CHP frequencies

Here's some useful information from RICHARD (CA-SF-002) in San Francisco

San Francisco PD PIC: Portable Inter-Unit Communication

Zone 1 (low band 1, PIC zone 1) includes Ingleside, Park, Richmond and Taraval stations.

Zone 2 (low band 2, PIC zone 2) includes Mission and Southeast stations.

Zone 3 (low band 3, PIC zone 3) includes Central, Northern and Southern stations. (i.e.,downtown area)

Squad cars are dispatched on the low-band channels and use these for car-to-car communications as well. "Code-33" emergencies are usually repeated on Citywide 1 460.450 and the zone PIC channel. In recent events requiring large-scale mobilization, command channels have been citywide 1 or 2 460.075.

155.550 (high band 5) Detectives and tactical is also shared by the University of California at San Francisco

460.525 is authorized but generally unused by SFPD. However, both simplex and repeater communications have been monitored on this channel recently.

San Francisco, being both a city and county, has no patrol responsibilities for its county sheriff's. They handle jail security and civil & criminal warrant service. Together with a number of non-public-safety city agencies they use 158.760 R.

From MIKE in Idaho (ID-001)

SKI	Bogus Basin Resort	151.925
SKI	Bogus Basin Resort Rescue	164.600
SKI	Taylor Mountain	154.540
SKI	Elkhorn Village Inn	154.515
SKI	Sun Valley Co. Inc.	151.715
SKI	Elkhorn at Sun Valley	152.420
SKI	Sun Valley Taxi Limo	151.685
SKI	Sun Valley Ski School	157.560

NOTE: Some of these freq's are business column material but it seems a shame to break them up. Lyle.

OREGON

Kevin (OR-) sends in some corrections and additions to the November column. Kevin lives in Salem. Marion County.

Countywide fire frequency assignments: F-1: 153.770, F-2: 154.160, F-3: 154.415, F-4: 154.280, F-5: 154.385.
None of the above are used for telemetry. In addition to the above, some agencies are also licensed for 153.830 for on-scene portables. This is not common throughout the county.
Primary frequency used by stations: (underlined most commonly used)
100: F-1, F-2, F-5 (KOG409 primary transmitter with KBQ750 as aux.)
453.450 Salem only alarm channel KTA983 (simulcast with F-1 and likely to change soon) (F-3 and F-4 used to lesser extent and both are on aux. transmitter only)
200: F-2 350: F-1, F-2 (also use 154.040 for occasional use)
400: F-1, F-2 440: F-1, F-2 450: F-2 490: F-2 500: F-2, F-3
550: F-2 600-640: F-2 (also use 154.310 for contact with Albany/Linn co.
650: F-2, F-3 680: F-2, F-3 750: F-2 790: F-2, F-3
800-830: F-2, F-3 850: F-2 900: F-2 940: F-2 950: F-2, F-3

Additional stations not listed in November column:
100 (also includes Spring Valley with no base transmitter. Included with Salem, Keizer and Marion County Dist. #1 in the Salem area dispatch center)
300 (delete as combined with 100 and no separate transmitter)
440 Drakes Crossing KGY499
490 Scotts Mills KEC522
630 Millersburg KCL518
640 Talbot KCL518
680 Gates KIB276
940 Monitor (no base transmitter)
Also on F-2 in county is Detroit-Idanha although they do not utilize countywide numbering system.
Countywide vehicle numbering system (not used in city of Salem):
xx1: Chief or Batallion Chief (x11 commonly used for BC)
xx2: Assistant Chief or Fire Marshall
xx3: Rescue vehicle
xx4: Salvage vehicle
xx5: Primary pumper
xx6: Secondary pumper
xx7: Tertiary pumper or ladder
xx8: Brush or ladder
xx9: Tanker
City of Salem vehicle numbering system:
Engine 1 (pumper), Truck 1 (ladder), Support 1 (salvage/rescue), BC 2 (Batallion Chief), FM 5 (investigator),TO 3 Training Officer), U11 (maintenance: alarm boxes,etc.), Grass 1 (brush), Tanker 1 (tanker)
City of Salem station locations:
Station 1: 370 Trade St. SE Station 2: 875 Madison St. NE
Station 3: 1870 Lansing Ave. NE Station 4: 200 Alice St. S
Station 5: 1520 Glen Creek Rd. NW Station 6: 2740 25th St. SE
Station 7: 4730 Liberty Rd. S
Corrections/additions to Marion County radio code:
02: Medical aid alarm, 80: Put the coffee pot on, 81: Water dept. emergency
Also, Willamette Ambulance has changed their F-1 from 155.265 to 155.295. And they use F-2 154.515 for paging.
From LYLE (OR-009)
Checked with my insiders at Oregon State Police who say their airplane hs taken to the air and is being used...but is seeing alot of down-time for show to other PD and law enforcement flaks. They also say that the chopper idea has been scrubbed. However, don't be surprised if you see a second plane used for speed enforcement and traffic patrol.
Forgot to include in the last column the repeater input for OSP's hand held...155.505.
Now here's OSP's unit numbering system for part of Division 1-Northwest

Public Safety - West (continued)

Station 19 Portland-Multnomah County
19-10 Station commander
19-11 Assistant station commander
19-12 Station corporals
19-21 Patrol I-405 and I-5 from Marquam bridge to Interstate bridge
19-22 Patrol back-up to 19-21
19-23 Patrol I-5 from Marquam bridge to Wilsonville
19-24 Patrol back-up to 19-23
19-25 Patrol-free car in core area of Portland
19-26 Patrol I-80N from I-5 to Cascade Locks
19-27 Patrol I-80N from I-5 to Troutdale
19-28 Patrol I-80N from Troutdale to Cascade Locks
Station 11-Clackamas County
11-10 Station Commander
11-21 Patrol Highway 99E
11-22 Patrol 82nd Ave. & Highway 213
11-23 Patrol Highway 26 from Gresham to Brightwood or Mt. Hood
11-25 Patrol Estacada-Mollala area including hwys 211, 224, 212 & 213
11-26 Patrol Southwest Clackamas Co. including hwys 43, I-205 & Lake Grove
11-30 Criminal investigators
11-40 - 43 Patrol Highway 26 to Warm Springs Reservation. (11-40 is sup.)
11-60 Extra patrols
11-70 Game officers
The 10 series are district cars from Division 1
10-10 Major
10-11 Captain
10-12 Leutenant
10-30 Criminal man
10-70 District Game man
10-71 Assistant District game man
The 80 series is the Game airplane
And 95-10 is the governor

UTAH

Also from MIKE (ID-001) comes more information on ski resorts in Utah

SKI	Park City	151.835
SKI	Brighton	151.715
SKI	Powder Mountain	151.745
SKI	Snow Basin	151.805
SKI	Brianhead	151.895
SKI	Alta	154.540
SKI	Beaver Mountain	155.220

NOTE: Once again, these freq's are business column but we'll put them here anyway.

WASHINGTON

And here's some info from my good buddy BOB (WA-007)
SORRY...THIS SHOULD HAVE BEEN INCLUDED IN OREGON, BUT HERE GOES ANYWAY
LYLE.

For you fire buffs here is a general list of fire call boxes for the Portland Fire Bureau.
Boxes 1000 to 1999 Southwest
Boxes 2000 to 2999 Northwest
Boxes 3000 to 3999 Northeast
Boxes 4000 to 4999 Southeast
Boxes 6000 to 7999 North Portland and St. Johns
Box numbers 4000 to 4999 run from Southeast Burnside to Powell Blvd.
5000 to 5999 run from Powell Blvd. south to the city limits.
In North Portland the 7000 boxes are shallow while the 6000 boxes are out deep.
If you need to check a new antenna or radio for signal strngth, then the Portland Fire Bureau and Oregon's Fire Marshall's office are your best bet.

Public Safety - West (continued)

Every morning at 8:15 PFB runs a morning radio check. At this time they go through a complete roll call of all units in the city. Also one morning a week they test F-2 and check with the outlying counties. Every morning, the State Fire Marshall's Office down in Salem puts out a backyard burning advisory for the Willamette Valley and you can hear fire stations checking in up and down the valley.
There are no repeaters for fire stations in this area with the exception of one channel in Washington County and one channel in Clackamas County so this test is a good one.

Well, that's it for now folks. HAPPY NEW YEAR!!! Lyle & Bob

PUBLIC SAFETY - WEST, SOUTHERN CALIFORNIA - Eric Christensen, Editor

POLICE DEPARTMENT-City of Anaheim, California
Unit Numbering System "Station 26"

Radio Frequency:	460.050	R	"Green"	Dispatch
	*460.150	S	"White"	Car to Car
	*460.400	R	"Orange"	Mutual Aid
	*460.500	R	"Blue"	Task Force

*Indicates County Operated frequencies

All police units in the city of Anaheim consist of a five digit unit number; the first two digits are always "26", which stands for the Anaheim Police Department. The remaining digits indicate what type of unit & where it is assigned.

Patrol Division:
"100" series units Graveyard
"200" series units Day shift
"300" series units Swing shift
"S" Sergeants
NOTE: "Odd" numbered patrol units work the western section of the city.
"Even" numbered patrol units work the eastern section of the city.
"S1" is west area sergeant.
"S2" is downtown area sergeant.
"S3" is east area sergeant.
"S4" & "S5" assigned as needed.

Traffic Division:
790 Lieutenant
791, 792, 793 Sergeants
700 series Motorcycles, traffic units
760-779 Traffic control @ stadium
740-744 Vehicle impound cadet
780-784 Traffic collision investigators

Detective Division:
"500" series: Detectives
580-599 I.D. Technicians

Administrative Division:
"900" series: Administrative, training
450-458 Crime Task Force

Note: East/West divison is Harbor Blvd.
North/South division is Lincoln Blvd.

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Public Safety - West (continued)

POLICE DEPARTMENT-City of Fullerton — Frequency: 460.100 R

A.M.Shift Patrol: 24100 series units
Day Shift Patrol: 24200 series units
P.M.Shift Patrol: 24300 series units

Traffic: 24400 series
Investigation500 series
Support: 24600 series

Motorcycle traffic officers: 2401 thru 411

From ERIC (CA-LA-045) (Similar info also received from LAINE (CA-SD-)

Since the December 1979 issue of the RCMA Newsletter has gone to print, I was able to acquire several San Diego Police Department radio codes in response to a request from JEFF (CA-OR-012). These are disposition codes used in conjunction with SDPD's C.A.D.S. (Computer Assisted Dispatch System). Additions/corrections are welcome.

"A" Arrest made, report to follow.
"B" Arrest made, released on misdemeanor citation.
"C" Arrest via warrant, report to follow.
"G" Report to follow, "CR" crime report, etc.
"H" "Uncontrolled" report to follow, memo, form 163, etc.
"I" Recovered/impounded vehicle. report to follow.
"J" Followup to previous case, disposition already given.
"K" No report will be made.
"L" Unfounded call.
"P" Subject transported to medical facility.
"Q" Case turned over to another law enforcement agency.
"T" Assisted outside agency.

10-42 End of Watch. 10-87 Request back up.
10-96 Mental case. 11-07 Prowler

Many codes used by SDPD are similar to CHP codes in Police Call.

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From MICHAEL (IL-014)

Recently, I have been listening to skip from L.A. on 33.70, 33.82, and 33.98 mhz. My problem with listening to these frequencies is understanding what I am hearing. What is a Task Force? Why is there always mention of switching to other channels? What are the other channels used for? I just heard "Fire 4", and it sounded like a helicopter. How many fire helicopters are there?
33.70 and 33.82 mhz are L.A. City Fire Dept. dispatch frequencies. I am not familiar with what 33.98 mhz is. (Any fire buffs know this one? EJC-CALA 045.)

While we are on the topic of Los Angeles area Fire Departments, WALT (CA-OR-129) sent in a nice list of L.A. CO. F.D. frequency allocations: (UHF frequencies are same as listed in Police Call.)
Frequencies are assigned by battalion, NOT area. Freq 1 is countywide.

AREA	BATTALION	FREQUENCY
West Hollywood, South Bay, Marina	1	6
East San Gabriel Valley	2	2
East Los Angeles	3	4
Altadena, La Crescenta, Crescenta Valley	4	3
Malibu	5	7
Newhall, Santa Clarita	6	8
Carson, Palos Verdes, Lennox	7	5
Whittier, Norwalk, Pico Rivera, La Mirada	8	4
Lakewood, Paramount, Cerritos, Bellflower, Artesia, Compton Co. area, unincorporated 605 FWY	9	10

Public Safety - West (continued)

Temple City, Rosemead, Baldwin Park	10	3
Desert area	11, 12	11, 12
Willowbrook, So. Gate, Bell, Gardena, & Huntington Park	13	9
Future expansion	14	
Construction & maintenance (Mountain crews)	CM	8

From BRYAN (CA-OR-097)

CALTRANS

What is CALTRANS? The State of California Roads Department was formed in 1912, and in recent years was renamed "CALTRANS". The state is divided into eleven districts.
Los Angeles, or District 7, utilizes approximately 800 plus cars in maintenance and supervisory service. Within District 7, there are ten local areas, a signal lab and Bandini Yard.
It should be noted that the California Highway Patrol sends a daily dispatch to Caltrans' L.A. office to relay road and traffic conditions. To get the whole picture of freeway operations, it is helpful to monitor both the C.H.P. and Caltrans.

District 7 utilizes four radio frequencies:

47.02	"WHITE"	Southern & northern areas
47.12	"BLUE"	Lancaster & Parker
47.08	"ORANGE"	Car to Car
47.24	"GREEN"	Freeway operations & local

CALTRANS District 7 Mobile Unit Numbering System-Southern California

Orange Co. Maintenance	7-1-0	through 7-1-90	*
Eastern Maintenance	7-4-0	" 7-4-90	*
Westwood	7-5-0	" 7-5-50	*
Metropolitan L.A.	7-7-0	" 7-7-89	*
Long Beach	7-9-0	" 7-9-60	*
West Valley	7-13-0	" 7-13-80	*
Executive branch	7-X-0	" 7-X-9	
Maintenance	7-1	" 7-19	
"	7-Y-1	" 7-Y-13	
Bridge & pavement rehabilitation	7-Zero-0, 7-Zero-1		
Day pavement rehabilitation	7-Zero-30, 7-Zero-31		
Night pavement rehabilitation	7-Zero-40, 7-Zero-41		
Bridge crew-south	7-Zero-60, 7-Zero-61		
Bridge crew-north	7-Zero-70, 7-Zero-71		
Traffic Operations-East (response)	7-W-3	through 7-W-23	
" " " (planned closer)	7-W-30	" 7-W-34	
Traffic Operations West (response)	7-J-0	" 7-J-45	
" " " (planned closer)	7-J-22	" 7-J-24, 7-J-30	
Shop	7-R-0	" 7-R-92	*

* Indicates some unit numbers are omitted by Caltrans.

Caltrans District 7 Remote Base Sites (Info submitted by BRYAN (CA-OR-097) obtained from "Communications Center Bulletin")

KFV 908	Mt. Lukens	KME 251	Cuyamaca
KMJ 305	Santiago	KZE 689	Los Pinetos
KLV 840	Rolling Hills	KUZ ---	Johnstone Peak
KMV 480	Mt. Lee	KRO 296	Hauser Peak
KZQ 532	Oat Mt.	KMD 446	South Mountain
KMA 303	Heaps Peak	KRM 654	Baldwin Hills

Public Safety - West (continued)

Caltrans Statewide Radio System Network-From ERIC (CA-LA-045)

Channel	Frequency	District	Channel	Frequency	District
A "WHITE"	47.02	04, 07	F "BLUE"	47.12	07
B	47.04	09, HQ	G	47.16	03, 08
C	47.06	04	H	47.18	05
D "ORANGE"	47.08	Local	I	47.20	01, 05
E	47.10	02, 10, 11	J "GREEN"	47.24	Freeways, C

From Bay Area Scanner Club (via BRYAN (CA-OR-097))

Caltrans Statewide Districts

District	Frequency	Area of Service
01	47.02	Greater Eureka area
02	47.10	Greater Redding area
03	47.16	Greater Marysville area
04	47.02, 47.04	Greater San Francisco area
04	458.60	" " " " mobile only
05	47.16	Greater San Louis Obispo area
06	47.20	Greater Fresno area
07	47.02	Greater Los Angeles area
08	47.16	Greater San Bernardino area
09	47.04	Greater Bishop area
10	47.10	Greater Stockton area
11	47.10	Greater San Diego area

Additional frequencies-unconfirmed use. From ERIC (CA-LA-045)

Channel X	45.68	District 07 Freeways (also called "Special Channel"
Channel Y	151.04	District 04 Bridge
Channel Z	458.60	District 04
	47.04	Auburn to Donner (I-80 FWY); Summit

County Flood Control & Road Channels-From BRYAN (CA-OR-097)

FC	151.16	R	Orange Co. Station 6-Flood Control
HWY	151.085		" " Station 8-Road Dept.
FC	151.145	R	San Bernardino Co. Flood Control
HWY	159.12	R	" " " Road Dept.
FC	159.27		Los Angeles Co. Flood Control
FC	44.84		" " " L.A. District & weather
FC	44.96		" " " L.A. District Flood Control

CANADA

Send Canadian frequency information, radio system details and other information relating to Canadian monitor radio listening and questions to: Rory B. McEvoy, 12 Castlegrove Blvd., Unit 9, Don Mills, Ontario, M3A 1K8; (416) 449-4170 weekends and 7-11 PM EST/EDT weekdays ex THURS.

No column was received this month from Rory. IBR

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- Monitoring & The Law
- Channel #'s / System Uses
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- Civil Defense/Search & Rescue
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- Department of Motor Vehicles
- Forest Rangers/Indian Affairs
- Correctional Institutions
- Radar Communications
- Car to Car

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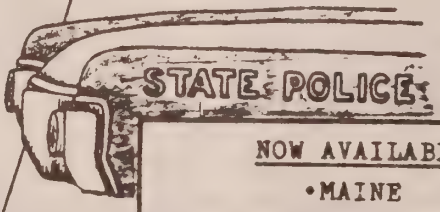

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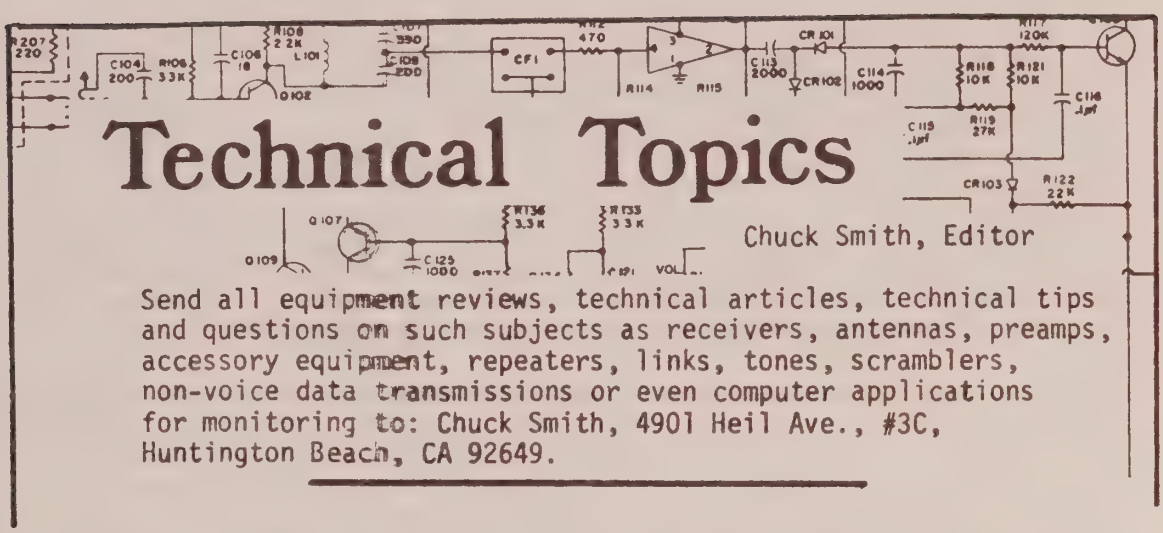

Technical Topics

Chuck Smith, Editor

Send all equipment reviews, technical articles, technical tips and questions on such subjects as receivers, antennas, preamps, accessory equipment, repeaters, links, tones, scramblers, non-voice data transmissions or even computer applications for monitoring to: Chuck Smith, 4901 Heil Ave., #3C, Huntington Beach, CA 92649.

Gadzooks!! The 1970's have up and disappeared on us, and we have arrived at an entirely new decade. Now, as mundane as this may seem to a lot of you, it simply excites the hell out of me because I very much enjoy thinking back on the years just past and all of the various and sundry developments that I have witnessed in the field of electronics. I think that it's an even greater thrill for me to let my imagination run rampant and mentally theorize about all of the wondrous things yet to come in the ten years that lay ahead of us.

I think that the greatest beneficiary of the recent boom in electronics technology in the past decade has got to be the consumer market. Nowhere has the invasion of this fascinating field been so widespread as it is into our very homes. The past ten years has seen such developments as the home video tape recorder, personal computer, and, oh yes, let's not forget the programmable monitor receiver. Communications satellites have brought us all closer together, and the computer games we've all seen this holiday season have literally made the term "microprocessor" a household word. In actuality, the demand for microprocessor chips, and in fact for almost all types of semiconductor devices has grown to the point where the demand far outstrips the supply. Even large manufacturers of computers and associated equipment are feeling the crunch.

How then, I ask myself, can we top this?? Can the advancement of technology and scientific achievement keep doubling and re-doubling as it has in the past 25 years or so, and if it can, what new wonders will it bring us? Allow me, if you will, to make a few tentative predictions.

First of all, I expect to see a steadily decreasing reliance on communications by wire. The proliferation of geostationary communications satellites and the ever-broadening horizons of microwave technology will allow these man-made wonders to assume a greater share of our communications burden. As capabilities increase and costs decrease, sending information by satellite will be reasonable even over moderate distances.

Secondly, the acceptance of the home computer will become almost a universal phenomenon. As parts costs decrease, unit costs on home units will plummet, finally coming to rest under $250. High-volume production technology will aid in producing a new wave of dedicated-purpose microprocessors for such tasks as home temperature control, functional logic for automotive use, and the like. For those individuals not interested in owning their own computer, independent television networks will develop in the larger American cities, allowing everyone who wishes it access to high-capability computer services on a time-sharing basis.

Television networks themselves will have been significantly altered by the communications boom. Several television distribution companies will offer non-stop commercial-free programming directly from the satellite to the consumer, for a monthly cost of less than $50. These new satellites will take advantage of new breakthroughs in the high microwave regions, and

will allow the satellite earth terminal to use antennas, of a parabolic dish configuration, of about three feet in diameter. The entire earth terminal, including low-noise amplifier and video down-converter, will cost less than $300 to manufacture.

Finally, what about the two-way radio market, and the monitor receiver industry which depends on it? In these areas I see advancing technology as somewhat of an adversary, because I believe as the state of the art advances, the new emphasis will be on the radio "system package". Now by that I mean that radio system contractors, such as Motorola and General Electric, will begin to bid for equipment contracts with more of a service outlook. For example, instead of providing 75 two-way radios to a police department in Anytown, USA, the company would propose to, by supplying the necessary hardware, provide a communications system for the police department of Anytown, USA. This would allow them to use such advanced communications techniques as spread spectrum and digital voice protection, since this would not harm the "system package". Unfortunately, this will drastically decrease the number of systems that will be receivable without some type of special equipment. Cost, at least at the outset, will be a prohibitive factor, and will keep the growth of new technology down to some degree, but as old systems become obsolete and are replaced with new ones, this type of equipment is going to find greater and greater acceptance, particularly among agencies of government at all levels. By the year 1989, I would estimate that about 75% of all law enforcement agencies in the United States will be using some sort of "system package", which, although not specifcally intended to thwart listeners, will manage to do the job quite effectively. The number of such "system packages" will vary from a low of about 20% among the public utilities and transportation systems to a high of greater than 90% of federal government and military systems. I see this transition, sadly, as inevitable, and the only question I have is just how long it will take. This, I feel, will be largely up to us.

Well, these are my predictions for the industry in the next decade. I must admit that, although these predictions are based on some pretty well-founded facts, I hope that I'm wrong about the last one. I guess the only way to find out is to come back and read the January, 1990 issue of the RCMA Newsletter!!

REDDY KILOWATT EXPOSED!!

Before I go on to answer some questions from readers, I'd like to shed a little light on a question presented by IDEN (CA-RI-001) and CHUCK (PA-005) in the Utility section of December's Business, Etc. column. The question was in relation to the local power utility's useage of the VHF high-band frequency 154.46375 MHz to control load management equipment by remote control. Well, these systems are in use in many areas of the country, and with energy costs rising rapidly, you can be sure that this level of utilization will increase in the future. Systems utilizing remote control of electrical loads are manufactured by such companies as Honeywell, Scientific-Atlanta, and my own company, Energy Conservation Systems. These systems vary from quite simple ones that simply turn one selected load on or off to complex ones, controlled by a microprocessor, that cycle loads on and off in response to actual energy useage in order to enforce a predetermined budget. Loads which are considered good candidates for energy management are air conditioners, pool heaters, etc. During critical peak periods of energy consumption, such as from noon to five P.M., should the utility find itself in a situation demanding it, it can transmit a tone on this frequency and thereby activate the load management capabilities in any given area. The receivers are tone decoder types, and will therefore respond to a transmission only if the proper tone is present. Once the right tone is received, a contact is closed in the receiver, and, at

least in the case of the Motorola receiver, will be automatically reset at the end of a five minute period. This means that to maintain load management, the tone must be sent again before the expiration of that five minute time period. This signal, by the way, is referred to as a SCRAM, which is evidently a term which in utility jargon refers to the process of removing or "shedding" loads from a power distribution network.

TREATS FOR THE OUT-OF-BOUNDS HOUNDS

One of the most frequent questions I have been asked recently concerns the programming of the BC-210, BC-220, and BC-250 to receive frequencies normally considered out-of-band. With the new units hitting the market all the time, it's only natural to want to find out what, if any, capability the unit has for reception of those bogus frequencies. Allow me to quote a couple of interesting tidbits from a letter from WAYNE (CA-SL-002) regarding the BC-220.

"The unit will search from 50-118 MHz or from 50-512.450 MHz or any regular frequency. It will search from 136-144 MHz or 136-140 MHz (with a special sequence). It seems I can make it search out of band and even enter it in, BUT it won't scan that frequency (reads ERROR on that channel). One thing you can do is search from 50-136 MHz and when you get to 118-136 MHz it will be searching in 5 KHz steps instead of 25 KHz steps and will enter that 5 KHz type frequency and scan it. Reception is bad out of band; only near the end or beginning of each normal band is it OK. Here's the sequence I use:

1. Turn the set off and on (to clear the memory).
2. Go to any channel.
3. Enter frequency (136.0 MHz).
4. Set first limit for 144.0 MHz.
5. Press SEARCH (reads ERROR).
6. Press LIMIT (reads 136.0 MHz or the entered frequency).
7. Press SEARCH again (now searches from 136-144 MHz).

To search from 136-140 MHz, do the following:

1. Do all of the steps (#1 through #7 above).
2. While you are searching, stop at 140.0 MHz (or whatever) by opening the squelch. Do not press LIMIT yet.
3. Now press 136.00 LIMIT (not ENTER); this is your second limit.
4. Now press SEARCH (reads ERROR).
5. Now press LIMIT (reads 140.00 MHz or whatever frequency you happened to stop at).
6. Now press SEARCH (reads 136.0 MHz).
7. Close squelch; it will now search from 136-140 MHz.

I have tried all sorts of combinations with the above. The rest of the scanner works great."

One of the points that WAYNE makes in his letter sort of fits in with the letter that I briefly touched on last month from the Radio Research Group, in which they cautioned that while the receiver may be programmable outside of the range for which it was intended, that performance will be severely degraded, and in fact, the frequency synthesizer itself will not function properly outside of a certain range of frequencies. Keep in mind that Bearcat products use the "track-tuned" front ends which utilize varicap diodes to center the RF amplifier around the signal of interest. The varicap diode itself has a limited range of capacitance, and once at one of these limits, can be changed no further. Therefore, once outside the intended tuning range, these receivers will suffer a serious loss of sensitivity. Naturally, once the VCO loses lock, the frequency synthesizer will stop working, and as they say, that is that. In addition, many of the signals found outside of the public service bands are not narrow-band FM signals, and the reception of these will be quite marginal at best.

While I receive many questions regarding this type of programming, I receive precious few letters such as that from WAYNE. So, if any of you have any little tricks or techniques that you use to program your scanner for those "forbidden" frequencies, please jot them down and send them in. It would help me immensely in answering those questions from your fellow RCMA members, and it would help me too, because then I wouldn't feel so stupid, ha ha.

ANTENNA FOR APARTMENT DWELLERS

Here is an excellent article sent in by BILL (KY-002) on the use of a discone antenna for apartment dwellers.

In the September issue, William (CH-) had a question about improving monitor reception in a townhouse community which does not allow outside antennas. I live in a community with a similar rule and was able to at least partially solve the problem of poor reception.

First, you must decide which bands you are interested in and which directions the signals of interest come from. In my case, all three land mobile bands plus aircraft band are of interest, with an omnidirectional receiving pattern being necessary.

The building in which I live is a two-story unit with an attic having a peak height of four feet. A Hustler discone antenna was mounted in the attic and fed with RG-8U cable (it just fit in the four-foot space available).

The discone is a broadband omnidirectional antenna which behaves like a vertical dipole. The Hustler DCX discone has a specified bandwidth of 40 MHz to 700 MHz. Reception quality in the range of 40 MHz to 465 MHz is quite good considering that the antenna is only 20 feet high and is mounted inside a building. On VHF-LO, state police transmitters 100 miles away are received regularly. VHF-HI distance limit is about 75 miles. Since the UHF stations in my area are within about 15 miles of my station, it is difficult to estimate the available UHF range. As a "bonus", the antenna also covers FM broadcast and most TV channels, but reception on these bands may be poor because the omnidirectional pattern causes multipath distortion and ghosts.

All of this sounds great so far, but the discone does cause a few problems. The broadband omnidirectional characteristics of the antenna place a great deal of burden on the receiver to reject spurious signals. If you live close to an FM station or TV station, this type of antenna may well be unusable. I'm presently using a Bearcat 220 with good success; only occasionally the local TV stations cause interference. At my location most other scanners, the Bearcat 210 and Tennelec Memoryscan for example, are all but unusable with the discone.

If you would like to try building a discone from scratch, the job does not appear to be too difficult. Listed below are several references that will enable you to design a discone covering any reasonable frequency range.

1. Armig G. Kandoian, "Three New Antenna Types and Their Applications", Proceedings of the I.R.E., February, 1946, pp 70w-75W, Waves and Electrons Section.
2. Boyer, "Discone - 40 to 500 MHz Skywire", CQ Magazine, July, 1949.
3. The ARRL Antenna Book, Thirteenth Edition, 1974, pp 298-299.

PEEKING AT PL FREQUENCIES

A letter from MIKE (MI-016) asks: "I'd like to know if there is any way to tell what the "PL" frequency is on the local police channel. would putting an audio frequency counter across the speaker and waiting for a dead carrier work?"

Well, I guess that providing the carrier was quiet for a long enough period of time and that the level of PL tone injection was high enough you could measure the PL frequency by using the method you describe. If you need to know the exact frequency, however, this method lacks a little bit of accuracy, since PL frequencies are defined to within 0.1 Hz.

All in all, there are only about 28 or so recognized EIA frequencies used for PL signalling, and if you had access to a PL tone decoder and a number of the frequency-determining modules, you could arrive at an answer by trial and error. Other than this, I guess an attempt at direct measurement is the best way to go.

HINTS AND KINKS DEPARTMENT

Here are two interesting little hints submitted by GEORGE (OR-001):

1. If you have a hand-held that locks up with a steady carrier while trying to listen to J. Edgars' boys, here's the solution. (This frequency is an offset for that area, used in various places around the country. If you have the problem, you'll know right away what I mean). The problem is that in poorly shielded receivers the unit will pick up harmonics of its own second oscillator. This also affects 153.68 MHz. The cure? Simply solder a small 68 pf. disc capacitor right across the second oscillator crystal, the 10.245 MHz one. This shifts the oscillator frequency a few hundred hertz, which hardly affects alignment, but moves its harmonics many times more. Of course, it may move the carrier to another active channel, in which case you should try a slightly larger or smaller cap. There may be a shield over the oscillator section (not doing much good). Be careful not to short anything when you reinstall it with the cap in place.

2. Need a handy source of 12 volts to run your new pre-amp? Look no further than the radio it's sitting on. The DC auto power lead connector no doubt has 12 volts on it whenever the scanner is plugged in. The actual voltage will probably be closer to 16 volts so you'll need to experiment to determine what value dropping resistor to put in series with it. Some scanners (like the BC-250) use a series diode for reverse polarity protection, in which case no voltage will appear at the connector. What you can do is remove the diode, jumper the connection, then install the diode from the positive lead, reverse-biased, to ground. That way you'll still have polarity protection at the expense of the fuse.

   A couple of warnings: first, for God's sake, don't go crazy. There's probably only a hundred milliamps to play with at the scanner power supply. Don't try to run anything other than a two or three stage pre-amp on it. Make your wiring completely insulated and safe. There's no fuse in the BC-210, for example. Also, your pre-amp will need an on-off switch since this connector is always on. A little common sense, a few minutes time, and you've saved a few bucks on another supply for your pre-amp.

Thanks, GEORGE, for those interesting little tid-bits. Readers should be aware that the technique in hint #1 can be used whenever a birdie occurs on a particular frequency of interest. Make sure, however, that the added capacitance doesn't cause enough phase shift to keep the crystal from starting up when power is first applied. Turn the scanner on and off a few times to check out this point.

800 MHZ SAFETY QUESTION

While the question of radiation safety limits is not a new one, it seems to have been given renewed consideration with the advent of the new 800 MHz public service band. Many studies have been made, both by the Government and the private sector, to determine the maximum amount of RF radiation to which the human body can safely be exposed. There is no doubt that some sort of practical limit does exist; otherwise, we might easily convert the entire world into one gigantic microwave oven!!

The amount of RF energy to which one can safely be exposed for long periods of time varies with several factors, two of which are the frequency of the energy and the type of tissue to which you are applying the dose of radiation. Representatives of Motorola, Inc. have been addressed with some quite specific questions regarding operator safety in conjuction with the use of some of their hand-held 800 MHz units. In response to these questions, Motorola has conducted some tests to investigate RF energy deposition in simulated human operators exposed to electromagnetic fields generated by typical hand-held radio units operating at 150, 450, and 840 MHz, with a transmitter power of 6 watts in all cases. Absorption was, prior to these tests, thought to occur mainly in the area just below the boundary of the brain and the surrounding bone in the skull, but was found instead to be concentrated much deeper in the cerebral cortex. This peak area of absorption was believed to have been caused by a focusing of the electromagnetic energy by the curvature of the frontal lobe of the skull. An additional absorption peak was found to occur at the surface of the eye, one of the most sensitive areas when exposed to high-energy fields of RF. According to the Motorola tests, the increase in tissue temperature caused by these absorption peaks was so small that no thermal damage could result from normal use of the equipment. To summarize the data, it was stated by Motorola that for all frequencies tested, portable hand-held transceivers are not biologically hazardous when operated according to recommended procedures and for short time periods.

These questions and the somewhat sketchy conclusions arrived at by this particular investigation prompt me to wonder what new problems will be discovered as two-way radio services expand into the 900 MHz regions with ever-increasing numbers. The Federal Communications Commission is currently granting licenses in two new mobile communications services which will be making extensive use of these frequencies, and in addition, the Commission is considering a proposal by the utility companies to use this region for a 900 MHz version of the load management system which I described earlier in this column. Add to this roughly half a million new paging users, and consideration of a completely new personal communications service, and it rapidly becomes obvious that 900 MHz is going to get full of users in one hell of a hurry. Keep an eye on this one, sports fans, it should be a real doozy!

SATELLITE MONITORING

I was quite downhearted to learn of the possible demise of the satellite column, due to present lack of interest and material. I personally enjoy the column, and think that BILL and JOHN, the editors, have done a wonderful job in presenting the material that they have. I also feel, that in view of the future expansion in this area by the communications industry, that it would be a great disservice of the hobby to allow this column to fold up. I think there are many areas of interest to the monitoring community here, and that perhaps difficulty of access to the necessary equipment to exploit this field may be the source of the waning interest. Shame on you!! Whatever happened to the pioneering do-it-yourselfers out there? With over 1000 members in the RCMA, do you mean to tell me that

not one has constructed receiving equipment? Is this a hobby made up entirely of "appliance operators" who treat their hobby like watching TV and their equipment like the kitchen toaster? Come on, now, I know better than that! Why, I'll bet for every member that writes in with a project he has constructed that there are at least three others that built some sort of project and didn't tell anyone about it.

Among the ham radio community (and just plain experimenters as well) right now there is a sudden interest in building satellite receiving equipment in order to monitor (meaning WATCH) to transmissions from the various domestic communications satellites. Why doesn't someone write in with a project like that? I'm interested myself in putting something together to do this, but it'll be a while before I get anywhere, I'm afraid. There are channels and channels of 24-hour, commercial free television being beamed down from these satellites, and the only thing standing between you and them is the availability of equipment. What happens when a lot more services start using the capability of this type of technology? Are we just going to roll over and play dead because it isn't always easy to get where we want to go? I don't think so, and this is my way of asking everyone out there to become a contributor to this hobby. Return some of the enjoyment that monitoring has brought to you, and in this way you'll be helping to make it even more enjoyable for everyone.

Thanks a lot, and I'll be seeing you all again next month!!

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Mark Holmes, Editor

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EDITOR'S COMMENTS

Thanks to Edward DuFour (CT-5) for contributing to this months column.

I would like to take this opportunity to thank the many members who have taken the time to write me over the past couple of months. Your questions and correspondence are always welcome.

I am requesting member to send in UHF and VHF airline business frequencies to be listed in this column.

A few members have inquired about my monthly deadline. For those who are interested, it is the 7th of each month.

DEFINITIONS

BRAKING ACTION "CONTINENTAL 802 BRAKING ACTION REPORTED AS FAIR BY A DC-9" A report of conditions on the airport movement area providing a pilot with a quality of braking that he might expect on rainy or icy days. Braking action is reported in terms of good, fair, poor or nil.

OPTION "CESSNA 1234J LEFT BASE REQUESTING THE OPTION" A procedure in which a pilot has the discretion of making a full-stop-landing, touch-and-go or a stop-and-go.

SIGMET "ATTENTION ALL AIRCRAFT THIS FREQUENCY, HAZARDOUS WEATHER SOUTHEAST TENNESSEE, NORTHEAST ALABAMA AND NORTHERN GEORGIA. MONITOR THE VOR BROADCAST WITHIN 150 MILES OF THE SIGMET AREA" Weather phenomena which is potentially dangerous to all aircraft, specifically: tornadoes, squall lines, embedded thunderstorms, hail 3/4" or larger, severe turbulence, severe icing and widespread duststorms which lower visibilities to less than 2 miles.

STOP-AND-GO "CHEROKEE 4567X RIGHT DOWNWIND FOR STOP-AND-GO" A procedure in which a pilot makes a normal landing and comes to a complete stop on the runway centerline, however instead of turning off the runway, the pilot will add full power and take-off from that point.

TOUCH-AND-GO "BARON 6789L RIGHT DOWNWIND FOR TOUCH-AND-GO" A procedure in which a pilot makes a normal landing, however while the aircraft is still on the landing roll, the pilot will add full power and make a normal take-off.

AIR ROUTE TRAFFIC CONTROL CENTER

Air traffic control specialists at FAA air route traffic control centers are primarily responsible for the control of aircraft that are flying on instrument flight plans. The safety of IFR traffic is the prime responsibility of the ARTCC.

When an aircraft that is operating on an IFR flight plan departs the area controlled by a tower, the departure controller in the tower relays the control of the aircraft to the ARTCC. The ARTCC controller communicates with the pilot and identifies the location on his radar scope. The controller

then gives the pilot instructions, air traffic clearances, and advice regarding flight conditions along their route of flight.

On a long flight, the control of an aircraft may be handed over from one sector to another and from center to center, as the aircraft flies through the air traffic control system. Finally, as the aircraft nears its destination, its control is transferred from the ARTCC to the approach controller at the destination airport.

The United States is divided into 22 of these centers that jointly coordinate the flow of IFR traffic between their assigned areas. The centers across the country each have direct communications with adjacent centers.

Today, almost all control by ARTCC of aircraft flying at sufficiently high altitudes are exercised through the use of radar. VFR pilots, in some cases, may take advantage of radar service from ARTCC's, however this is dependent upon the amount of IFR traffic a particular controller is handling at the present time.

ARTCC SECTOR CHARTS

One tremendous service which ARTCC facilities provide the aircraft monitoring enthusiasts, is called sector charts. The information is free of charge for those who desire to obtain them.

Although the material is nothing more than mimeographed paper, it portrays the ARTCC airspace and sector boundaries, plus it lists the VHF and UHF communications frequencies along with the remote transmitter sites. The charts are revised several times over the course of a year, so the material will almost always be accurate.

When writing, just state that you would like copies of the high and low altitude sector charts for the specific ARTCC. Listed below are the mailing addresses of the 22 ARTCC's for the United States, including Anchorage and Honolulu.

I urge members to report any frequency corrections and additions to this column, for the benefit of other members. Since the membership of this club is growing at such a steady rate, I will list these addresses again, later in the year.

Albuquerque ARTCC
6900 Los Angeles Drive, N.E.
Albuquerque, NM 87113

Anchorage ARTCC
5400 Davis Highway
Anchorage, AK 99506

Atlanta ARTCC
299 Woolsey Rd.
Hampton, GA 30228

Boston ARTCC
Northeastern Blvd.
Nashua, NH 03060

Chicago ARTCC
619 Indian Trail Rd.
Aurora, IL 60507

Cleveland ARTCC
326 E. Lorain St.
Oberlin, OH 44074

Denver ARTCC
2211 17th Ave.
Longmont, CO 80501

Fort Worth ARTCC
13800 FAA Rd.
Euless, TX 76039

Honolulu ARTCC
Box 4009
Honolulu, HI 96813

Houston ARTCC
Box 60308
Houston, TX 77205

Indianapolis ARTCC
Box 41070
Indianapolis, IN 46241

Jacksonville ARTCC
Box 98
Hilliard, FL 32046

Aircraft (continued)

Kansas City ARTCC
1801 E. Loula
Olathe, KS 66061

Memphis ARTCC
3229 Democrat Rd.
Memphis, TN 38118

Minneapolis ARTCC
512 Division St.
Farmington, MN 55024

Oakland ARTCC
5125 Central Ave.
Fremont, CA 94536

Seattle ARTCC
3101 Auburn Way South
Auburn, WA 98002

Los Angeles ARTCC
2555 E. Avenue P
Palmdale, CA 93550

Miami ARTCC
7500 N.W. 58th St.
Miami, FL 33166

New York ARTCC
Islip MacArthur Airport
Ronkonoma, NY 11779

Salt Lake City ARTCC
2150 W. 700 North
Salt Lake City, UT 84116

Washington ARTCC
Leesburg, VA 22075

FREQUENCIES

Edward DuFour (CT-5) reports that the frequency of 119.9 is used by Pratt and Whitney in East Hartford, Connecticut.

One frequency which may be of interest to members is 123.45. It is used for airline-to-airline communications.

FIRE FREQUENCY LOCATOR MAPS

TWO MAPS NOW AVAILABLE – BOTH GREAT!

1. City of Boston Fire Department. This map shows streets, company location, Districts and Divisions, plus chart showing street address, type of equipment, plus more.

2. BRAND NEW!! The Commonwealth of Massachusetts.
   This state map shows all town and county boundaries. We have included frequencies for every city and town. Mutual aid districts are also shown. A chart that shows all mutual aid districts and their frequencies is also included. There is even more that you'll have to see!!

Cost is $2.00 per map plus postage:
First Class in tube + $1.00
First Class folded + $ .50
Please include postage and handling for each map.

Send check or money order to:
Henry Hoffman
Box 1203 DEPT RM
Boston, MA 02104

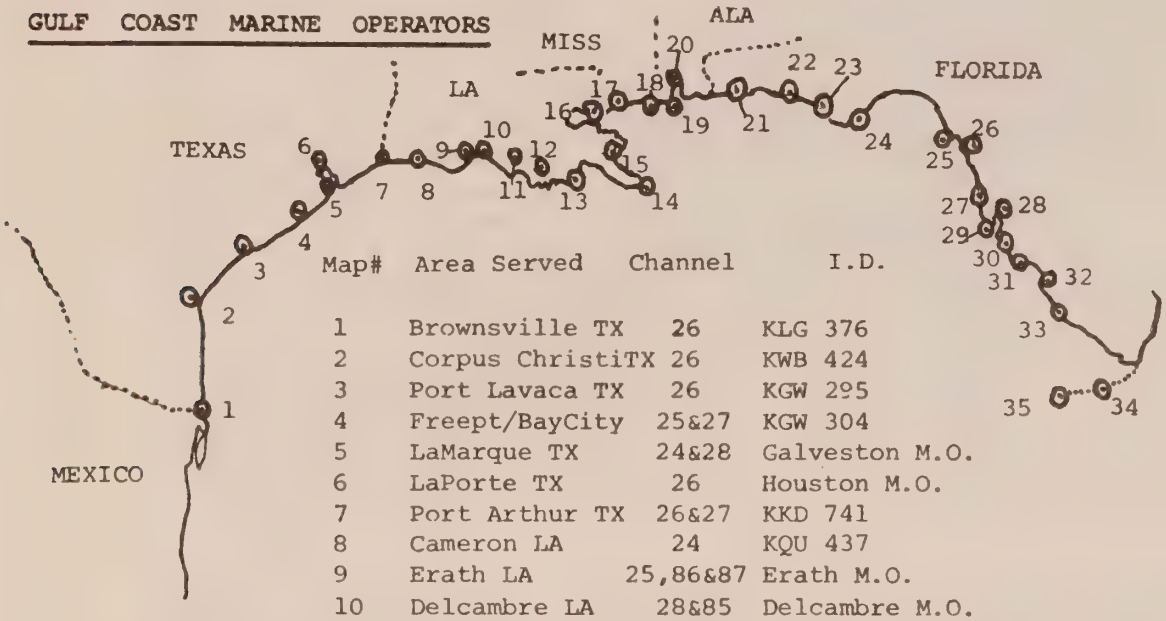
- paid advertisement -

VHF Marine

Rod O'Connor, Editor

Send information, articles, frequencies and how they are used and questions that relate to private, commercial and Coast Guard VHF maritime and inland waterways radio communications to: Rod O'Connor, USCG Group, 259 High St., South Portland, Maine 04106.

GULF COAST MARINE OPERATORS



Map#	Area Served	Channel	I.D.
1	Brownsville TX	26	KLG 376
2	Corpus ChristiTX	26	KWB 424
3	Port Lavaca TX	26	KGW 295
4	Freept/BayCity	25&27	KGW 304
5	LaMarque TX	24&28	Galveston M.O.
6	LaPorte TX	26	Houston M.O.
7	Port Arthur TX	26&27	KKD 741
8	Cameron LA	24	KQU 437
9	Erath LA	25,86&87	Erath M.O.
10	Delcambre LA	28&85	Delcambre M.O.
11	Morgan City LA	24&26	Morgan City M.O.
12	Cocodrie LA	27	KSK 317
13*	Leeville LA	25	KKO 382
13*	Leeville LA	85	KSK 316
14	Venice LA	27,28&86	Venice M.O.
15	Hopedale LA	85	Hopedale M.O.
16	Slidell LA	84	Slidell M.O.
17	Gulfport MS	28	Gulfport M.O.
18	Pascagoula MS	27	Pascagoula M.O.
19	Coden AL	25&26	WLO
20	Mobile AL	26&28	WLO
21	Pensacola FL	26	Pensacola M.O.
22	Ft.Walton Bch.FL	28	KWB 455
23	Panama City FL	26	Panama City M.O.
24	Appalachicola FL	28	KSK 339
25	Cedar Key FL	26	Cedar Key M.O.
26	Crystal River FL	28	KWB 447
27	Clearwater FL	24	KUZ 385
28	Tampa FL	26	KWB 426
29	St.Petersburg FL	27	St.Pete M.O.
30	Palmetto FL	25	KUZ 383
31	Venice FL	28	KTD 563
32	Fort Myers FL	26	Ft.Myers M.O.
33	Naples FL	25	Naples M.O.
34	Marathon FL	25	KSK 210
35	Key West FL	26	KQU 411

* Note - #13 Leeville, LA has two seperate marine operators.

Next month: The Southeast Coast of U.S.

SATELLITES

Bill Blomgren & John Coker, Editors

Send information about satellite frequencies which you have received with type of traffic heard, orbital data, hobby receiving equipment and antennas and questions pertaining to satellite monitoring to: Bill Blomgren, 505 E. Mulberry, #3, Normal, IL 61761.

MARISAT (GAPFILLER)

This month we will examine one of the UHF satellite systems currently operating between 225 MHz and 400 MHz. The system we will be examining will be the Navy's leased satellite communications system more commonly known as the GAPFILLER or MARISAT system. In 1976 the United States Navy decided to lease UHF satellite service from the Comsat General Corporation as a stop gap measure until their own fleet satellite program known as FLTSATCOM was completed. This interum move to place a military communication system on a commerical satellite was felt necessary because of the delays in both funding and construction of the FLTSATCOM project. Since the inclusion of military hardware on a commercial satellite was done purely as a stop gap measure, the military portion of the satellite was designated as GAPFILLER. The commercial portion was then designated as MARISAT which is short for Maritime Satellite

As part of its agreement with the Navy, Comsat General Corporation launched three satellites into geostationary orbit between February and October of 1976. One satellite was placed over each ocean, thereby giving the Navy nearly total global coverage. These satellites were equipped with three transponders. Two of these transponders were for use by commerical ships and off shore installations such as oil rigs. The third transponder was dedicated exclusively for use by the Navy and provided one wide band and two narrow band channels in the 225 MHz to 400 MHz range. The entire satellite system was designed with a 5 year life expectancy.

Satellite Locations			
SATELLITE	OCEAN	LONGITUDE	DATE OF LAUNCH
MARISAT (F_1)	Atlantic	15°W	February 19, 1976
MARISAT (F_2)	Indian	73°E	October 14, 1976
MARISAT (F_3)	Pacific	176.5°E	June 9, 1976

The commercial transponders on the satellites provide both C-band (6/4GHz) and L-band frequencies. Most commerical maritime operations are now using the L-band range with uplinks between 1636.50 MHz-1644.00 MHz and downlinks between 1535.00 MHz-1542.50 MHz. The Navy's portion of the satellite system is divided into three operational channels as shown below.

CHANNEL	UPLINK	DOWNLINK	BANDWIDTH
1	307.750	254.150	25.00 F9
2	311.150	257.550	25.00 F9
3	302.700	249.100	500.00 F9

Satellites (continued)

Technical Points

Each of the satellites are equipped with a UHF three-element right hand circularly polarized helical antenna array. This helix assembly is made of thin-walled copper-plated aluminum tubing and the antennas are about 50 inches in length with a helix diameter of 16 inches. For those of you who are not familiar with helical antennas, the helix array on the GAPFILLER portion of the satellite would look like a series of three corkscrews. One end of each corkscrew would be attached to the corner of a triangular framework on the satellite. The other end of each corkscrew would then be pointed toward the earth. This type of antenna system results in a receiver gain factor of 13.0db and a transmit gain factor of 12.5db. The wide band channel (249.100 MHz) has an output power of about 56 watts or an EIRP of 28dbw. The two narrow band channels (254.150 MHz and 257.550 MHz) each have an output power of about 18 watts or an EIRP of 23 dbw. Each satellite has an antenna pattern which allows it to cover a spot on the earth equal to about 19% of the earth's surface.

What Should You Monitor

Of the three UHF downlink frequencies on these satellites only the two narrow band channels offer much hope from a monitoring standpoint. These narrow band channels employ FM modulations and are narrow enough to be monitored on a scanner with the aid of a converter. Since these two channels are used as Navy relay channels some clear voice traffic may be heard. The wide band channel on the other hand offers little hope as a monitorable channel of any interest. This channel is 500 KHz wide and is divided into numerous sub-data channels with data speeds ranging from 75-2400 bits per second. For those of you who are thinking about hooking your home computer to one of these satellite data channels, remember that the military often uses an 8 level D.O.D. code format. Most home computers use the 7 level ASC II format. This format difference along with the frequent use of data scrambling techniques makes this wide band channel an uninteresting choice for satellite monitoring.

A Word of Warning

Before you rush out and buy a converter to monitor these satellites let us give you a few words of warning. First, the coverage pattern of these satellites is such that only receivers along the east and west coast of North America have much chance of receiving them. Their pattern also makes it impossible to monitor more than one satellite from each coastal area. Secondly, as we stated earlier, this satellite system was designed as a short term system. As such, the Navy is already beginning to replace it with the new Fleet Satellite Communications system which we will be discussing next month. For this reason you should not spend too much time or money trying to monitor the UHF portion of these satellites. Instead, You should concentrate on the commercial L-band portion in the frequency range of 1535.00 MHz - 1542.50 MHz.

The Future

For those RCMA members who are interested in marine communication, this L-band range is the marine band of the future. Comsat General Corporation recently signed an agreement whereby they have become a member of the International Maritime Satellite Organization known as INMARSAT. As part of this agreement a new generation of international maritime satellites will be launched starting in 1981. This new group of maritime satellites will be completed by 1984. Once completed the new INMARSAT system will offer voice, data, facsimile, telex, and TWX service to all maritime ocean craft throughout the world. Any RCMA members interested in maritime communications should look seriously at this frequency range especially since it appears that these satellites will be operating in this range for many years to come.

Editor's Note

Maybe the RCMA technical topics editor, Chuck Smith, can modify his 800 MHz converter to cover the frequency range of 1535.00 MHz to 1542.50 MHz. If any of you RCMA members or even non-members have monitored either the UHF GAPFILLER or the L-band MARISAT, please let us know. Being located in the Midwest we are unfortunately out of range of all three of these satellites.

Special Thanks

We would like to thank B.A. Hunnell for the fine collection of satellite articles he sent us. Unfortunately Mr. Hunnell did not include his membership number. We would also like to thank Joe Novak (VA-004) for his continued support of the satellite column. Special thanks also to William Wedertz (IL-007) for his excellent list of satellite frequencies some of which were used in this month's article.

Information

If you would like more information on the MARISAT (GAPFILLER) system, consult these sources:

1. COMSAT
   Office of Public Information
   Communication Satellite Corporation
   950 L'Enfant Plaza SW
   Washington, D.C. 20024

   Ask for information on the MARISAT system and a copy of the "COMSAT Guide to the INTELSAT, MARISAT, and COMSTAR Satellite Systems".

2. Signal Magazine
   One Skyline Place
   5205 Leesburg Pike
   Falls Church, VA 22041

   August 1978 issue, page 62
   May/June 1979 issue, page 47

3. Satellite Communications Magazine
   P.O. Box 5922
   Denver, Colorado 80217

   November 1978 issue, page 18
   March 1979 issue, page 11
   April 1979 issue, page 20
   May 1979 issue, page 17

photo department

Send photographs of custom monitor listening posts, unusual or extensive monitor or two-way antenna systems, user station consoles (PD, Fire, Paramedics, etc.) or other monitor/two-way related equipment of interest. Photographs must be 3 x 5 inches or larger, black-and-white with good contrast, sharply focused and attractively composed. Each photo must be accompanied by details and explanations of equipment. Photos will not be returned. If you have questions, write first and please include an SASE.

Mike reports that no photos were received this month for publication. We have a place for photos now and no photos! What is this? Get those cameras into action!

FCC TOPICS

George DuBois, Editor

Send FCC news and information of interest that relates to two-way communications above 30 MHz and questions regarding the FCC Rules and Regulations to: George DuBois, 10048 NE Campaign, Portland, OR 97220.

Recent FCC Actions

The most important action recently (to the people who sell radios, anyway) was the decision to reduce the mileage separation and increase individual channel usage in the 851 to 866 mHz. band. From November 12, 1979, the mileage between base stations on the same channel is reduced from 100 to 70 miles in urban areas, from 110 to 60 in suburban areas. This, of course, makes the same channels open to more stations in more areas. The channel loading (number of mobiles) was increased to 50 for public safety, 90 for business and 70 for most other services, the same for shared and non-shared channels. (Note that these are minimums, before a second channel will be assigned, not maximums.) It was pointed out at the hearings that T-band channels presently have loading specs. of 90 and the 450-470 band channels typically have loading up to 150 mobiles, so it's really no big deal. A licensee also now has to indicate he will load a channel to 90% of it's capacity before he is assigned it exclusively, up from 70%. One-third of the 600 851 band channels are still reserved for trunked systems, but the FCC has been under wider pressure to release them for conventional use. Let's face it, who the hell is going to spend a few grand more on a computer-controlled trunked system, when a conventional two-way radio system is all most businesses need or want. They've also been asked to reserve some of the conventional channels for public safety use before they're all used up by business users. Deadline to file reply comments on this proposal was extended to Jan. 10. Watch for action on these. (But don't hold your breath.)

Recognizing the increase in helicopter activity, and the desire for an exclusive helicopter-to-helicopter channel, the FCC designated 123.025 mHz. for just such use, effective Nov.21. The only objections came from certain interests who complained the .025 channel-spacing allocation discriminates against users of older equipment which only has 50 or 100 kHz. spacing. The FCC took a "tough luck" attitude, assuming older equipment will be replaced soon anyway. The fixed-wing private aircraft air-to-air frequency remains 122.75.

In it's continuing effort to simplify licensing procedures, the FCC ruled that mobile phone users who use their own equipment can be licensed under the "blanket authorization" of the radio common carrier company, instead of being required to obtain their own license.

A ruling that made the national news was the decision not to require licensing for receive-only satellite facilities. Under the new policy, only those stations who wish to be protected from interference need apply for a license. The requirement for a construction permit was also waived and the amount of information on applications was lessened.

FCC Topics (cont.)

The FCC ruled in the matter of the need for a radio service to transmit to spectators in sporting events a running account of the progress of the game. This "sports-casting" service was tried out by a professional golf association but was opposed by the Business Radio Service users group, in which band the service would have been located. The FCC decided no substantial need has been demonstrated and it would not be in the public interest and so terminated the proposal.

The ARRL has petitioned the FCC to allow full 15 kHz.-bandwidth FM in most of the six-meter band (50 to 54 mHz.). Presently AM, CW and FM are allowed from 50.1 to 54 mHz., but the bandwidth of FM between 50.1 and 52.5 must not exceed that of AM, or 6 kHz.

Question?

A member, John Hart in Philadelphia, questioned my paraphrasic comments in November about the health hazard at 800 mHz. Quite simply, radio waves at these frequencies can be dangerous. As pointed out in a recent newsletter, one state (Connecticut, I think it was) is concerned with the danger to the equipment operator at even VHF frequencies, and most environmentally-conscious states, like Oregon, are concerned with the effects of radio frequency radiation. The only material I have at hand is the following: "Biological damage from exposure to intense RF radiation has been known for several years, but only recently have quantitative limits been established. A... limit for exposure to RF radiation has been established at .01 watts per square centimeter at any frequency....General Electric has proposed that a maximum safe limit of .001 watt/cm^2 be used for continuous exposure." This was written in 1959! Twenty years later, the Oregon State Department of Health uses the OSHA limits of 10 milliwatts/cm^2 at any frequency, for industry, such as RF heating or welding, but the city of Portland is presently drafting an ordinance setting ambient limits at 100 microwatts between 30 and 300 mHz, 500 μwts.above or below these frequencies. Most studies indicate a hazard but the exact danger can't be readily measured, such as the point where cell destruction begins. The higher the frequency, the greater the penetrating effect, but greater power is required. In the face of all the studies, including ones by the Russians, Motorola recently did one at 800 mHz. with a simulated human head and said the danger is minimal and only 'slight warming' occured. That scares me.

The End?

No room to cover a service this month. Next month I'll go through either the Remote Pickup Broadcast or the Highway Maintenance Radio service, I haven't decided. I'm not doing these in any order, for the most part. If you need some information on a service now, or have a question, let me know.

MONITORING & THE LAW

Bob McGovern, Editor

Send all articles, references, copies of monitoring laws and questions pertaining to the legal aspects of monitor radio listening to: Bob McGovern, P.O. Box 5041, Lighthouse Point, FL 33064.

CHUCK (PA-005) states the following. "While in LA recently, a CHP officer stopped me while I was watching a big brush fire on the Ventura Freeway, pulled over on the shoulder. He told me I could have been arrested for sightseeing at the scene of a disaster. Back here in the east, fires usually attract up to several hundred onlookers. Maybe it's just one of those east-west cultural differences, but it might be of interest to other monitors to discuss this law as to keep out of trouble."

(Editor's Note) Under California law, section 402 PC it is unlawful for any "person to go to the scene of a disaster for the purpose of viewing the scene or the activities of policemen, firemen, other emergency personnel, or military personnel coping with the disaster in the course of their duties during the time it is necessary for emergency vehicles of such personnel to be at the scene of the disaster for the purpose of protecting lives or property, unless it is part of the duties of such person's employment to view such scene or activities, and thereby impedes such policemen; firemen, emergency personnel or military personnel in the performance of their duties in coping with the disaster, is guilty of a misdemeanor.

For the purposes of this section, a disaster includes a fire, explosion, an airplane crash, flooding, windstorm damage, a railroad accident, or a traffic accident."

As punishment, a court of law may impose a sentence of up to six months imprisonment in the county jail and/or a fine not exceeding five hundred dollars.

In summary, if you go to the scene of a disaster and while there, interefere with the activities of public-safety personnel, you are guilty of a misdemeanor.

It should also be noted, that California has another PC section which can affect monitor radio listeners. It reads as follows.

636.5. DIVULGENCE OF A POLICE RADIO COMMUNICATION TO A SUSPECT IN A CRIMINAL OFFENSE IS A MISDEMEANOR. Any party not authorized by the sender, who intercepts any police radio service communication, and who divulges to any person he knows to be a suspect in the commission of any criminal offense, the existence, contents, substance, purport, effect or meaning of such communication concerning such offence with the intent that such suspect may avoid or escape from arrest, trial, conviction or punishment is guilty of a misdemeanor.

As used in this section, police radio service communication means a communication authorized by the Federal Communications Commission to be transmitted by a station in the police radio service.

Monitoring and the Law (Continued)

The following is a summary of an article which appeared in the "Routine Stops" column of the California Highway Patrolman, October 1979. On February 16, 1979, at approximately 1900 hours, Officer S. Youmans heard a 10851 CVC (stolen vehicle) broadcast that had just occurred in the City of Monterey Park. As Officer Youmans was preparing to mount up on his 750 Suzuki, he observed the stolen vehicle drive by. The officer immediately gave chase, but shortly thereafter, lost sight of the stolen vehicle. He then decided to have one more look and not more than 200 feet in front of him, in a drive-in dairy, was the stolen car, with three occupants. While sneaking in, the officer was observed by one of the occupants and a chase ensued. The pursuit lasted for twenty minutes and was brought to a conclusion with the cooperation of a monitor radio listener. A tow truck driver, had copied the pursuit on his scanner and had observed the vehicle attempting to turn around on the officer. The wrecker driver then positioned his tow truck behind the stolen vehicle, effectively pinning it between his truck and a steel signpost, thus terminating the pursuit. The three occupants attempted to flee on foot. The officer caught one, and the tow operator caught the second subject.

This is a very fine example of good cooperation and involvement between a law enforcement agency and a monitor radio listener. Does any member have a story like this to share?

Unknown to most listeners is New York's scanner law which is as follows.

EQUIPPING MOTOR VEHICLES WITH RADIO RECEIVING SETS CAPABLE OF RECEIVING SIGNALS ON THE FREQUENCIES ALLOCATED FOR POLICE USE. A person, not a peace officer, who equips a motor vehicle with a radio receiving set capable of receiving signals on the frequencies allocated for police use or knowingly uses a motor vehicle so equipped or who in any way knowingly interferes with the transmission of radio messages by the police without having first secured a permit to do so from the person authorized to issue such a permit by the local governing body or board of the city, town, or village in which such person resides, or where such person resides outside of a city or village in a county having a county police department by the board of supervisors of such county, is guilty of a misdemeanor, punishable by a fine not exceeding one thousand dollars, or imprisonment not exceeding six months, or both. Nothing in this section shall be construed to apply to any person who holds a valid amateur radio operator's license issued by the Federal Communications Commission and who operates a duly licensed portable mobile transmitter and in connection therewith a receiver or receiving set on frequencies exclusively allocated by the Federal Communications Commission to duly licensed radio amateurs.

Comments would be appreciated from NY members in regards to their knowledge of the above law and the degree of its enforcement.

This column needs <u>your</u> support. CONTRIBUTE!

Business, Etc.

Chuck Gysi, Editor

This column is for reporting frequency and radio system information for the following varied services: business, forest products, petroleum industry, special industrial, manufacturers, news media (behind-the-scenes radio, TV & newspaper), motion picture industry, security (private patrol, detective agencies, campus security & police, amusement park & stadium security, shopping center & mall security, plant/business/ hotel security, etc.), General Mobile Radio Service (GMRS), mobile phone/RCC & paging, trucking firms, bus lines, taxi cabs, tow trucks, utility companies (private & municipal water, power, electric, gas, telephone, etc.), and all school & college related frequencies. Send information and questions pertaining to the radio services covered in this column to: Chuck Gysi, P.O. Box 216, Willow Grove, PA 19090.

Hello, once again to all. I've been swamped with lists and information from members. I really appreciate all the information that everyone is sending, but due to the volume of information, it's very possible that in the future that I may not be able to use everything everyone sends me. But don't despair; nothing will be heaved. I'll hold on to it in case we hit some dry months such as the summer. Also, due to deadlines, be advised that it could conceivably take two to three months before your information appears in this column. Also, I prefer regional lists as these are much more valuable than single listings. In other words a list of all news media frequencies in a city and its environs is preferable to just the freq of one TV station, unless there is just one broadcast station in your town. Examples would be the below lists for Chicago and San Francisco. Also, I would like to get more system detail lists such as the MIT and mall lists below. Knowing the unit numbers certainly enhances the listening. I do hope that you will share some of your information with our members through this column.

News Media/Film

MONITORING PHILADELPHIA TRAFFIC REPORTS

I've been working on this aspect of monitoring doggedly for the last couple of months and hopefully have filled the void for this information. Philadelphia area radio and TV stations are served by two traffic reporting services--the ARCO Go-Patrol and Shadow Traffic Network. These two services sell their reports to area radio stations, however there is a difference in their methods of operation. The ARCO Go-Patrol has been around town for many years now. The Go-Patrol operates a repeater with the output on 450.85 MHz and call sign KQA 895. The helicopter and the control station at the base operate on 455.85, the input frequency to the repeater. The control station call sign is KQA 894. The Go-Patrol helicopter has on board a pilot, a Philadelphia highway officer and the announcer, Walt McDonald. John Kane, back at the base keeps an ear on scanners and provides updates on construction and mass transit. He is assisted by Rick Gillespie. The Go-Patrol operates three Blazer-type trucks which are assigned to the highways. These trucks operate on 461.400, a business band repeater and report traffic conditions back to the control center. The control center than relays this information to the helicopter on 450.85. The broadcasts are live from the helicopter. ARCO gives network reports in which all the stations carry the broadcast and also carries broadcasts for each of the individual stations. The trucks carry emergency and motorist assistance supplies (gas, flares, extinguishers, etc.)

and the drivers assist motorists not only during the drive time but also they have one truck on the expressway all day long. If the truck spots a bad accident, the radio stations that receive their service will be given a landline. I have also heard the copter up giving reports to their stations on traffic before Eagles home games. The 450.85 station is licensed to Metromedia, owners of WIP-AM and WMMR-FM.

Shadow Traffic operates a General Mobile Radio Service system on 462.550. They also have a helicopter but it is only in the air for about an hour in the morning and an hour in the afternoon. (ARCO's is up for three hours in the morning and two hours in the afternoon.) Shadow's repeater is located on the top of the Holiday Inn at City Line and the Schuylkill. Their control center is on the 21st floor of the Inn. Shadow operates cars on the highways and reports this information back to the base. All this information is collated and each radio station that subscribes to their service is called by landline every half-hour and the report is live by telephone. Shadow Traffic also works in New York City and Chicago. The New York system also operates on 462.55 MHz and often one of the three helicopters that cover New York will trip up Philly's repeater. The New York copters identify as "Air-West," "Air-North," and "Air-East." I imagine Chicago might also be using GMRS. Is anyone able to confirm? Shadow also takes reports from CB radios that are in each of the cars. Shadow also owns a number of handheld GMRS radios and use these around their HQ. Just a word to warn, though. I've heard Shadow talk of possibly using "something better than a scambler" in the future, so let's not take advantage of this information. We'll only ruin it for ourselves if we do. The following lists breaks down the beats for the traffic services and IDs.

——— ARCO GO-PATROL

450.850 "Base"--control center
"Copter 1"--Announcer's helicopter
"Copter 2"--back-up helicopter

461.400 Unit 29--Delaware Expressway I-95
Unit 30--Schuylkill Expressway I-76 and roads and highways nearby
Unit 31--Schuylkill Expressway I-76

"Code Robin"--bridge opening
"Code ARCO"--? (any ideas?)
10-28--assisting motorist
Base-- WCT 275 (this is the control call)
Mobiles--KT 5508

(Note: I recently heard a fourth unit, unit 32 on the air, but at deadline time for this column, I don't have full information. The beats seem to be: Unit 29--South Jersey highways, Unit 30--Schuylkill Expressway, Unit 31--Delaware Expressway, and Unit 32--Schuylkill Expressway.

——— SHADOW TRAFFIC NETWORK

462.550 "Radio"--control center KAB 5235
Unit 2--Schuylkill Expressway I-76
"Air-3"--Helicopter
Unit 5--Delaware Expressway I-95
Unit 11--Schuylkill Expressway I-76

There are several other unit numbers used by their system. Unit 10 appears to be Rod Carson, one of

Business, Etc. (continued)

their announcers. Unit 1 seems to be the manager and units 6 and 14 seem to be radio technicians. Apparently Standard Communications equipment is being used by their network. I've heard their mobiles kick in the repeater up to 45 miles away.

From MICHAEL (IL-014): CHICAGO NEWS MEDIA

ABC		
455.0875	KYY 278	WLS-TV Ch. 7 Newsdesk F-1
455.5125		WLS-TV Ch. 7 News F-2
455.5875	KJM 544	WLS-TV Ch. 7 Master Control F-3
455.150		WLS-TV Ch. 7 Reserve Freq. for Master Control
450.4125	KOB 334	WLS-AM Radio Newsdesk
CBS		
450.050	KVF 938	WBBM-TV Ch. 2 News Control F-1
455.050		WBBM-TV Ch. 2 Mobile "Talk Back" to News Control
450.350	KVF 938	WBBM-TV Ch. 2 News Control F-2
450.800		WBBM-TV Ch. 2 Mini-Cam Control
161.700	KSJ 882	WBBM-AM Radio News base
NBC		
161.670	KSJ 871	WMAQ-TV Ch. 5 Newsdesk
450.550	KYY 424	WMAQ-TV Ch. 5 Studio "B" Mini-Cam Control
450.850	KYY 251	WMAQ-TV Ch. 5 Hancock Mini-Cam Control
455.850		WMAQ-TV Ch. 5 Reserve Freq.
161.760		WMAQ-TV Ch. 5 Reserve Freq. for Mini-Cam Control
161.640		WMAQ-TV Ch. 5 Reserve Freq.
450.450	KQQ 471	WMAQ-AM Radio Newsdesk
OTHERS		
166.250	KSB 840	WGN-TV and WGN-AM radio newsdesk, traffic helicopters and Hancock Master Control
173.225	KSD 567	Chicago Tribune circulation
173.275		Chicago Sun-Times reporters
173.375		Chicago Sun-Times circulation
450.150	KJP 974	WIND-AM Radio Newsdesk
450.1875	KKN 770	WFYR-FM Radio News desk R
450.650	KSE 876	WCFL-AM Radio Newsdesk
453.000	WDP 484	Chicago Tribune photographers and circulation
457.975		Chicago Tribune photographers

From RICK (CA-SF-002): SAN FRANCISCO BAY AREA NEWS MEDIA

161.670	KAK 413	KPIX-TV secondary (pagers, etc.) also KFR 951 Mobiles: KK 6031 BM
166.250		KSFO-AM BM
173.275	KMJ 871	San Francisco Examiner BM
173.375	KBJ 799	San Francisco Chronicle BM
450.0875	KKN 755	KCBS-AM reporters and traffic spotters R
450.150	KLI 921	KTVU-TV R
450.250		KNBR-AM (Mobiles: KN 6296) BM
450.350	KMM 788	KPIX-TV ("Air Source 1"?) BM
450.450	KJT 473	KRON-TV (Mobiles: KK 9263) BM
450.5125	KMM 791	KPIX-TV (Mobiles: KW 2597) BM
453.000		Oakland Tribune R
455.050	KMJ 577	KGO-AM reporters and traffic copter R
455.150	KJG 598	KGO-TV also KQA 893 BM
455.250		KTVU-TV input to 450.150
455.4875		KGO-AM input to 455.050
455.7125		KCBS-AM input to 450.0875

Business, Etc. (continued)
From BOB (KS-001):
——— Topeka, KS News Media
161.640 WIBW-TV Ch. 13 and radio remote pickup/news
161.700 KAL 653 WIBW-TV Ch. 13 and radio remote pickup/news
161.730 KTSB-TV Ch. 27 remote pickup
173.325 Topeka Capitol Journal reporters
——— Kansas City, MO News Media
161.700 KMBC-TV Ch. 9 remote pickup/news
161.760 KCMO-TV Ch. 5 and radio remote pickup
170.150 KLI 911 KCMO-TV Ch. 5 and radio news
450.1875 KMBC-TV Ch. 9 remote set-ups, security

GMRS

Your attention is directed to the details of Shadow Traffic Network's use of General Mobile Radio Service equipment under the News Media/Film section. Shadow Traffic most likely is the only GMRS licensee in the nation with helicopters on their system.

Business

From MARVIN (TX-002):
462.200 Gulf Oil Corp./Port Arthur, TX refinery
462.225 Texaco Inc./Port Arthur, TX refinery
464.975 Liberty TV Cablevision

From GINNY (MD-012):
151.650 Antietan Cable TV, Hagerstown, MD
151.745 Ellsworth Electric, Hagerstown, MD

Motor Carrier

From JOE (MD-0??):
AAA Dispatchers--tow trucks
150.950 Washington, DC and Northern VA
150.965 Washington, DC and Montgomery County, MD
452.525 Prince Georges County, MD
452.550 Northern VA

Mobile Phone/RCC

From GINNY (MD-012):
152.540 Frederick County, MD mobile phone
152.630 Martinsburg, WV and Hagerstown, MD mobile phone
152.720 Breezewood, PA mobile phone

Utility

From JIM (CA-LA-094):
451.400 General Telephone Co. installers, Los Angeles

From MARVIN (TX-002): Port Arthur, TX area
48.440 KKC 505 Gulf States Utilities Co. electric
48.500 KKC 497 Gulf States Utilities Co. electric
48.320 KKC 499 Gulf States Utilities Co. electric

Business, Etc. (continued)

153.410	KKH 431	Port Arthur Water Utilities Dept.
153.485		Southern Union Gas Co.
451.125	WHC 88	Gulf States Utilities Co. electric
451.450		Southwestern Bell Telephone Co.
451.500	WCB 60	Southwestern Bell Telephone Co.

Security

From JIM (CA-LA-094):
——— Mission Viejo Co. security/Mission Viejo, CA 508.2125
Units 1-49, 60-69, 70-89--Administration and construction
Units in 50 series--Sheriff Special Deputies (50##)
Units in 90 series--Lake Patrol
9001--Lake office
9002--Rescue boat
Base 1--Administration
Base 2--Construction
Base 3--Security

——— Los Cerritos Center/Cerritos, CA 464.525 KUP 644
Dispatch--Control 1
Mall Office--1 David
Security Chief--1 Charlie
Assistant--1 Lincoln
Sergeants--1 Sam, 2 Sam
Patrol--1-1 through 1-25
Maintenance Supervisor--1 Mike
Traffic Patrol--1 Tom
Plainclothes--1 Zebra

———Hawthorne Plaza/Hawthorne, CA 461.375 KEA 654
Dispatch--Control 1
Mall Office--1 David
Security--2 David
Security Chief--1 Charlie
Assistant--1 Lincoln
Sergeants--1 Sam, 2 Sam
Patrol--1 Frank 1 through 1 Frank 25
Traffic--1 Tom #
Special Unit-1 Zebra #
Observation Post--1 X-Ray #
Office Staff--Adam #

467.900 May Co. store security/ Los Angeles area BM
466.000 API Alarm Co./Los Angeles F-1 mobile
461.000 API Alarm Co./Los Angeles F-2 base
151.775 Marina Pacifica Condominiums/Long Beach, CA

TIP: For those with FCC freq readouts trying to find freqs for shopping centers, look under the owner's or developer's name, not the name of the center. A company that owns more than 30 malls in Southern California is licensed under the corporate name, not the malls. The location, however, should give a clue as it is for the mall.

School

From BOB (MA-020):
The Massachusetts Institute of Techbology (MIT) in Cambridge, MA has two radio systems. Both system's repeaters are located on the roof of a 29-story student apartment building. All mobile units are handhelds, except the ambulance and all equipment is Motorola.

461.575 WCU 91 Campus Patrol
461.250 KJX 415 Physical Plant

Business, Etc. (continued)

——— Campus Patrol

Unit 1 President's limousine
Car 20 West patrol
Car 21 East patrol
Car 22 Ambulance
Car 24 Detectives
Routes 1-10 Foot patrols

Code 1	Ambulance emergency	Code 10	Return to office
2	Ambulance routine	11	Lockout
3	Larceny	12	Escort
4	Phone office	14	Meet person
5	Officer in trouble	25	Explosion
6	Disturbance	33	Sudden death
7	Suspicious person	75	Bomb threat
8	Robbery	100	Reactor emergency
9	Intrusion alarm		

——— Physical Plant

Units 1-11 Grounds
14-30 Heat and Vent
38-60 Building services
No codes used.

From JOHN (CA-OR-078):

——— University of California at Los Angeles (Westwood, CA)

154.920 Clemars
155.010 UCLA to LAPD F-7
155.475 Primary Security KUB 766
155.505 Tactical Security KUB 766
158.865 UCLA from LAPD F-7

Freak Freqs

Here we go with another new category. Under this heading, we'll list some of those oddball frequencies, Freak Freqs, that don't seem to fit in anywhere else. If you have some off-beat frequencies, send them in to this column.

From JIM (CA-LA-094):

The following frequencies have just been granted by the FCC to the U.S. Olympic Committee for coordination of the games when they come to Los Angeles: 457.525 and 457.600. Both are repeater frequencies.

NEXT MONTH: Major league sports frequencies!

FEDERAL GOV'T and MILITARY

Robert B. Grove, Editor

Send all Federal Government and Military frequencies (including those of military aircraft), radio system details, and related questions to: Robert B. Grove, Route 1-Box 156, Brasstown, NC 28902. Sensitive frequencies will not be published. Coast Guard material must go to the VHF Marine editor.

I would like to take a brief moment to clear the air regarding a serious question which apparently is being circulated among some members. Am I using my volunteer position as editor to collect information to publish another book? NO! Although there is a possibility that I may publish another exhaustive frequency directory, it will be based upon official IRAC and FCC files of which I have more than 600,000 discrete frequency entries, not including my personal files.

The trusting donations of frequency lists by our members are used in the matter for which they are intended: to share with other members via the club magazine. They are an excellent source for frequencies being actively monitored in key geographical areas. While a few of the submittals are kept from publication, it is because of sensitivity, not because I want those listings for some subversive or self-serving use. I readily exchange a wide variety of my personal listings with many members who have shown that their interests are hobby-oriented, not exploitative.

As I have pointed out before, there are members who use the information published in these pages for commercial gain. I do not happen to be one of them. While I enjoy the privilege of editing the Federal and Military frequency columns, I am willing to defer the responsibilities quite cheerfully to anyone who feels that he can improve upon the column. As any editor will readily testify, the preparation of a monthly column is an imposition and a serious responsibility. We do it out of a sense of professional responsibility, not from a motivation of anticipated reward.

This month we are experimentally combining the Federal and Military frequency columns. In virtually every case, submittals of frequency information from our readers are in a combined format, indicating that most of us combine the information in our own lists anyway. The Department of Defense is a major federal agency; the original separate classification was done primarily because some of our members are military communications buffs. Since the polyglot category of "Federal" includes a vast array of other agencies, it seems futile to maintain the arbitrary division. If anyone violently disagrees, please let me know.

We would like to thank our members who continue to send in their coveted lists of frequencies. All editors know the importance of receiving these from our members each month, and we encourage you to send in lists no matter how small or large they may be. While most listings which appear in the RCMA frequency columns are available from the FCC, IRAC, and Police Call Magazine, there is no substitute for off-the-air monitoring and verifications of which frequencies are actively in use.

Federal Gov't/Military (continued)

On high band, scanners include only a portion of the military allocations. 138-144 MHz is used extensively by military commands, usually for base operations and commander's nets.

Within our scanning range, 148.00-150.80 continues this allocation. Additionally, 163.375-163.5875; 165-165.2125; 173.025-173.200, and 173.4-174 are good hunting grounds for military activity. Naturally, many of these frequencies are shared with other government services. Some are "pool" frequencies, shared on availability in the geographical region in which they are requested.

Army Corps of Engineers use common frequencies throughout the United States. The following set is an excellent example of those most frequently reported by members.

From Bryan (CA-OR-097) US Army Corps of Engineers

163.4125	repeater output for project offices
163.4375	repeater output for dam tenders and flood control
168.225	weather (Orange County)
169.425	telemetry (Los Angeles)

Bryan points out that there are about ten dams in the Los Angeles district, each with several gates and a call sign, one of which is WUK415. Thanks, Bryan.

Jerry (OH-015) wrote requesting answers to a couple of questions. Has anyone heard of a publication entitled, "The President's List of Classified Frequencies"? Has anyone a good list of Ohio Federal Government frequencies he would share? Please let Jerry know.

Some questions have arisen regarding the IRAC microfiche. For those unfamiliar with them, perhaps a short tutorial paragraph would be in order.

The Federal Communications Commission is responsible for non-government frequency assignments: police, fire, business, marine, and so on. The Department of Commerce has as one of its agencies the National Telecommunications and Information Agency; under it, the Interdepartment Radio Advisory Committee is encharged with frequency assignments for federal government agencies (Justice, Agriculture, military, even the FCC!).

Both the FCC and IRAC update and distribute on a periodic basis a set of microfiche (48X reduction) transparencies which can be viewed only by a microfiche reader (or a microscope). While FCC lists are entirely unclassified, IRAC lists which are routinely distributed to federal agencies are classified. Only when specially requested does IRAC run a computer-sorted unclassified set of 'fiche. And it is expensive! A set which I have from 1976 consists of about 50 fiche cards, each with 270 photo-reduced pages. It cost somewhere in the neighborhood of $500, and that was for only a small portion of the spectrum!

From Michael (IA-11) Marine Corps, Camp Pendleton, CA nets

38.80	Emergency Med-Evac; 0730-1360 weekdays
47.30	Northern Impact Area Control; callsign: "Crestline". 0700-1530 daily
49.30	Southern Impact Area Control; callsign: "Long Rifle". Continuous.
49.50	29 Palms, CA base safety net. Callsign: "Bearmat".

An interesting historical note: "Long Rifle" is situated atop "Cone Hill", built for John Wayne's "Sands of Iwo Jima". Thanks, Michael!

Ed (MA-017) is looking for some information regarding abbreviations which he has heard on government channels referring to their equipment. "ECC", "SLM", "SLS", and "SL" (mobiles only) have him puzzled. Can anyone help?

Special thanks this month go to several new contributors who appear below with their contributions. Won't you join them with your own list next month?

From Rickey (NJ-001) (low band government skip monitored since 1/78)

30.45	(White Sands Missile Range, NM; Ft. Huachuca, AZ and other Army bases -- ed.)
32.895	(could be .89 or .90) unknown base
34.09	Unknown (assigned to White Sands motor pool -- ed.)
34.100	Army range control
34.300	Ft. Hood range control
34.830	KSC634 (Dept. Interior Fish and Wildlife, Jamestown, ND -- ed.)
34.850	White Sands Missile Range operations and tracking control (paired 34.31 -- ed.)
35.000	Unknown military
36.050	Unknown military
36.100	Army MP (Ft. Huachuca; White Sands -- ed.)
36.250	Unknown (assigned to EPA for oil spill cleanup coordination-ed.)
36.330	Army range control
36.390	Unknown countdown
36.450	Unknown military
36.510	White Sands MP base security paired with 34.85 (also assigned 36.91 -- ed.)
36.600	Unknown (USN?--ed.)
36.900	Unknown (Army aviation testing -- ed.)
36.950	Army artillery range
37.190	Base activity
37.800	Unknown military
38.850	AAB350 Ft. Dix MP frequency 1; Provost Marshal ID at 0000 EST.
38.900	Business offices, repeater output
38.910	Ft. Dix frequency 2
39.560	Unknown military
40.310	KOP525 (Navajo Reservation, paired with 40.01 -- ed.)
41.100	Aircraft testing (military)
41.200	Aircraft (military)
42.150	Ft. Hood
46.055	(possibly .05 or .06 -- ed.) tactical communications

WOW! That's quite a list, Rickey. Many thanks for sharing it with us. It shows how productive judicious scanning can be. I've editorially added a few notes from my own file to suggest some additional information which may or may not be correct.

To help some of the newcomers out there who aren't familiar with low band federal allocations, we shall take a look at the official list. It must be remembered that military communications are authorized on <u>any</u> frequency on a non-interference secondary basis. Thus, military activity frequently pops up ona low-band police allocations. Naval vessels at sea will operate range and navigational equipment on frequencies that would wipe out TV reception near shore. But most low-band government activity remains within the authorized band plan shown below:

30.00-30.56	38.00-39.00
32.00-33.00	40.00-42.00
34.00-35.00	46.60-47.00
36.00-37.00	49.60-50.00

In Europe, the band plan extends all the way up to the FM broadcast band on a shared basis!

Walt (CA-OR-129) reports hearing "beeps" spaced at one-second intervals on certain frequencies in the 414 MHz range, and is curious as to what they are. To answer his question, these frequencies are used typically as point-to-point relays for VHF high band base to mobile communications. This allows agencies in a city out of normal direct-communications range to respond to mobiles and field offices in another city. If you listen long enough, and you don't go bonkers in the process, the voice relay will be eventually heard. To keep the agencies from going bonkers, the tone is filtered out. Listeners can filter out the objectionable beep themselves through the use of a selective "notch filter" found on many audio filters supplied by companies like MFJ, Autek, and Electronic Research Corporation.

From Ginny (MD-012)
149.865 Ft. Ritchie "Base 240"; security
33.80/33.84war games. National Guard, Martinsburg, WV
Ginny admits that she is really getting hooked by listening to all of the intrigue heard by scanner monitors. We couldn't agree more! Thanks, Ginny, and keep sending in these excellent "catches"!

From Rick

149.370	Barstow and Camp Pendleton, CA (USN weapons frequency — ed.)
149.950	military tactical
148.975	USMC tactical
41.000	Mather AFB National Guard. "Spartan" (could have been skip)
41.800	National Guard "Schooner Ops"; Stockton, Airport, CA
148.600	repeater for Presidio of San Francisco MP's (input 149.575)

That's it for this month. A very nice sampling, thanks to the members sending in their frequency lists to share with others. Let's hear from some more of you out there next month!

Railroads

Ken Fitzgerald, Editor

Send information about railroad frequencies and their uses, radio system details, tips for monitoring railroads, explanations of railroad jargon and related information and questions to: Ken Fitzgerald, P.O. Box 307, Springer, OK 73458.

The first order of business for the new year is to thank Marvin Suggs for his enthusiasm and diligence in starting up and expanding this column since last September, and to introduce myself as the new editor of this column. My name is Ken Fitzgerald and I am 24 years old, currently living in Springer, Oklahoma, which is roughly halfway between Oklahoma City and Dallas.

I first became interested in railroads at age 10 when I had the opportunity to ride in a locomotive, and my interest has never diminished since. My knowledge of railroads and their operating practices has advanced to the point where in college, I was asked to prepare and present audio-visual programs on railroads for all classes in the college of Business, using my own extensive photo collection. Since graduating with a B.B.A. in Business Management, I have been asked to speak about railroads to many local groups, such as the Kiwanis. One of my current means of support is working as a professional free-lance railroad photographer selling color enlargements to individuals, railroads, and the state of Oklahoma itself.

All of this exposure has allowed me to gain familiarity with all the aspects of the daily operation of a railroad, which I can directly relate to different railroads use of two-way radio. My interest in monitoring grew out of a desire to be able to hear railroad radio about six years ago. My equipment consists entirely of a family of Bearcats, including a 250, 210, IV, and new Thin Scan. I have found the Larsen model NMO-150, 5/8 wavelength antenna to be the best for my needs both in a base station configuration and on my car for mobile use. I also enjoy monitoring federal and state law enforcement frequencies here in Oklahoma, but railroads remain my primary interest.

On the subject of my plans for the column, I have the following ideas, and I am open to suggestions and criticisms at all times. In addition to listing the contributions of frequencies and information from members and from my own files, I will try to offer a serialized description of railroads and how they operate from the ground up, because so many misconceptions exist and because railroad "jargon" can be completely baffling to anyone but another railroader. I will try to categorize the frequencies listed herein by each individual railroad company, but I will also probably list them by either region or type of use, such as yard channels vs. railroad police.

The success of this column depends a great deal on the support I receive from you members. My own frequency lists cover just about every channel used within a 200-mile radius of my home, but beyond that I only have F.C.C. and other files

which only show assignments of frequencies to a railroad in a given area. It is up to you members, through your own initiative and/or my assistance, to track down actual frequency usage so that the information can be shared with the rest of the membership in this column.

To help members with programmable units who are interested in monitoring railroad radio but are uncertain as to what companies operate in their area, in return for a SSAE I will send as complete a list of assigned frequencies as I can from my files. Please send in all your questions about railroad operations and "railroadese" which I will try to translate into English. If anyone would rather send cassettes of railroad conversations, I will be happy to try to translate from these and then return them. For those who would rather call in their questions or contributions, my home phone is (405) 653-2641. This is <u>your</u> column, and it is up to you members to tell me whether or not I am providing the information and answers you want.

In order to get the ball rolling, I will devote the rest of this column to listing all the railroad frequencies used in my own state of Oklahoma. It is complete with the exception of one C.R.I.& P. frequency I am still doing research on. Next month I will begin to explain some of the terms used here below that may be unfamiliar to you.

<u>ATCHISON, TOPEKA & SANTA FE</u>

Road Channel Systemwide	160.650
Mobile Unit Access To Company Telephone System:	
Mobile PBX at Moore, OK	160.245/161.535
Mobile PBX at Perry, OK	160.425/161.295
Mobile PBX at Arkansas City, KS	160.260/161.490
Maintenance Of Way Systemwide	161.010
Oklahoma City 89th St. & General Motors Yards	161.370
Ok. City 89th St. Yard Hump	161.280
Ok. City 89th St. Yard Switch Crew #1	161.085
Ok. City 89th St. Yard Switch Crew #2	161.175
Ok. City G.M. Yard Switch Crew #1	161.415
Ok. City G.M. Yard Switch Crew #2	161.505
Ok. City 89th St. Yard Car Department	160.395
Ok. City Mechanical Department	160.440
Ok. City Piggyback Ramps	160.215
Santa Fe Trails Trucking Line	160.200

<u>CHICAGO, ROCK ISLAND & PACIFIC</u> (THE ROCK)

Road Channel Systemwide	161.610
El Reno Yard Car Department	160.380/161.520

<u>KANSAS CITY SOUTHERN</u>

"F-1" Road Channel Systemwide	160.260
"F-2" Shreveport, LA Dispatcher Channel:	
Nearest Microwave Relay Tower To Train	160.260
Train To Nearest Microwave Relay Tower	160.350
Shreveport, LA Dispatcher From Nearest Microwave Relay Tower To Trackside Stations & Official's Mobile Units	161.250
Officials Car-to-Car	160.890
Phone Patch From Heavner, OK To Mena, AR	160.740
Phone Patch Return From Mena To Heavner	160.305

Railroads (continued)

MISSOURI-KANSAS-TEXAS (KATY)

Road Channel Systemwide ---------- 160.590
Officials & Railroad Police Car-To-Car -------- 160.320
Railroad Police Car-To-Car ---------- 160.635

MISSOURI PACIFIC (MOPAC)

"F-1" Road Channel Systemwide ---------- 160.410
"F-2" Officials & Maintenance of Way ---------- 160.470
Burlington Northern Road Channel To Talk To
Unit Coal Trains With B.N. Locomotives -------- 161.100

SAINT LOUIS-SAN FRANCISCO (FRISCO)

Road Channel Systemwide ---------- 161.130
Mobile Unit Access To Company Telephone System
At Tulsa, OK Cherokee Yard ---------- 161.160/160.545
Officials & Railroad Police Car-To-Car -------- 160.920
Maintenance Of Way ---------- 161.430
Tulsa, OK Cherokee Yard Hump & Car Department - 160.500
Tulsa, OK Cherokee Yard Hump & Car Department - 160.800
Tulsa, OK Cherokee Yard Hump & Car Department - 160.980

SAND SPRINGS

All Operations ---------- 160.230

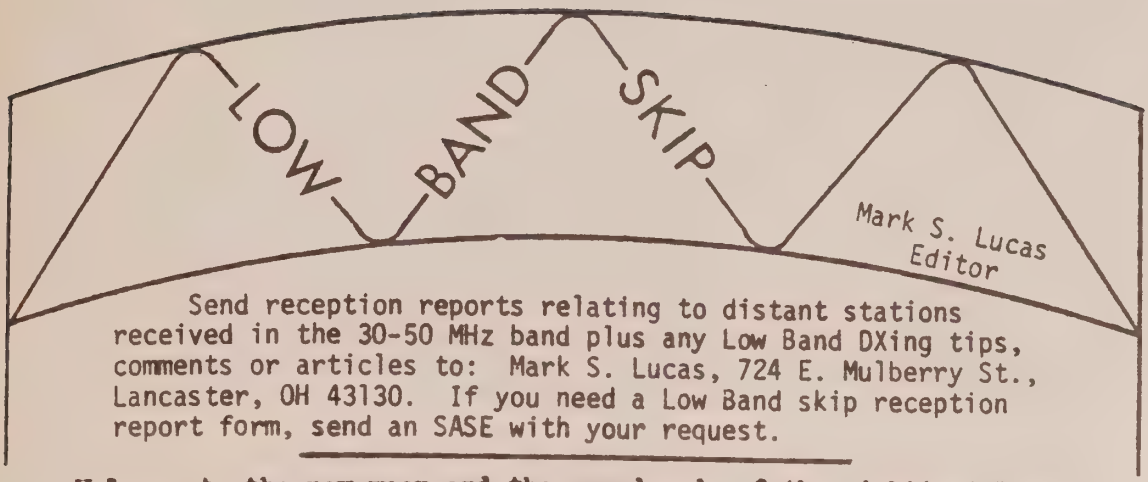
TEXAS, OKLAHOMA & EASTERN

Road Channel Systemwide ---------- 160.230
Switching Operations ---------- 160.650

TULSA, SAPULPA & UNION

All Operations ---------- 161.070

Dual frequencies specify repeater operation, and as usual only the first or output frequency need be monitored. That's all for now, and I will be looking froward to hearing from all of you in the months to come.



Send reception reports relating to distant stations received in the 30-50 MHz band plus any Low Band DXing tips, comments or articles to: Mark S. Lucas, 724 E. Mulberry St., Lancaster, OH 43130. If you need a Low Band skip reception report form, send an SASE with your request.

Welcome to the new year and the new decade of the eighties! Looks like contributions are coming by the tons. So,let's get hopping.

From BILL (CA-LA-009): 39.50 MHz KSA 925 "925 Clear." State PD
Base 10-28-79 1607 GMT Fulton Co.,Ill. 2000 miles
39.30 MHz KKC 593 "KKC 593" State PD
Base 10-28-79 1645 GMT Alexandra,Louisiana 2000 miles
42.42 MHz KIF 844 "KIF 844" State PD
Base 10-28-79 1659 GMT Lawrenceburg,Tenn. 2000 miles
45.46 MHz No Call "Tampa" Service ?
Base 10-28-79 1701 GMT Tampa,Florida 3000 miles
(Talking to Tallahassie about California skip signals)
37.18 MHz KQU 525 "Huntsville PD" PD
Base 10-28-79 1847 GMT Huntsville,(Alabama?) 2000 miles
(Call could have been KQ2 525. No listing in "Police Call")
(Bill uses a Bearcat 220 scanner in his listening)

From BOB (MA-011): 33.30 MHz KFG 504 "Houston" (Petroleum?)
Base/Mobile 10-14-79 1345 EDT (Houston,Texas ?)
39.12 MHz NO ID OR CALL Police (?)
Base/Mobile (Repeater) 1330 EDT 10-11-79 (Spanish speaking station)
39.18 MHz NO ID OR CALL Police (?)
Base/Mobile (Repeater) 1330 EDT 10-11-79 (Spanish speaking station)
(Any member know the location of these last two? Bob uses a Regency Touch)

From LYBRAND (CA-LA-157): 42.06 MHz "Sudbury,N.Bay,Pembroke" Police
Base 11-3-79 0830 PST Ontario Provincial Police Depts. 2200+
39.48 MHz KEB 237 "Nassau Co." PD
Base 10-13-79 1630 PDT Nassau Co., N.Y. 2800 miles
45.06 MHz KAQ 556 "Titusville" State PD
Base 11-1-79 2000 PST Titusville,Florida 2200 miles
42.10 MHz KQB 566 "Romney" State PD
Base 11-6-79 2030 PST Romney,West Virginia 2400 miles
(Lybrand uses a JIL SX-100 scanner receiver in his listening.)

From CHRIS (CA-OR-050): 37.26 MHz NO CALL "Morristown,Clayburg,Co."
Base 11-4-79 1525 PST (Any ideas of whom they are?)
37.10 MHz KEB 211 NO ID Police
Base 11-4-79 1559 PST Millburn Township,N.J.
37.14 MHz KQE 758 NO ID Police
Base 11-4-79 1602 PST Livingston,Co., Michigan
37.18 MHz NO CALL "Aberdeen" Police
Base 11-4-79 1624 PST (IDEAS AS TO WHERE?)
(Chris uses a Bearcat 250 in his listening.)

From MIKE (MO-002): 42.12 MHz NO CALL "Sacramento,Oakland" CHP
Base/Mobile 11-6 to 11-8-79 1100 CST Sacramento and Oakland,Cal.
(Mike uses both a Realistic PRO-77 and Regency ACT-16)

LOW BAND SKIP (CONTINUED)

From JOHN (IL-012): Please correct my last report. The location of the road construction crew using 42.50 MHz is in HAITI, somewhere near Port-Au-Prince! They were exchanging weather reports and other pleasantries with the Illinios State Police Troopers.

From MIKE (CA-RI-011): 33.94 MHz KVG 839 "Pasco Central" FD

Base 10-16-79 1903 PDT New Port Richey (OR) Elfers,Florida
33.78 MHz KXC 747 "KXC 747" FD

Base 10-7-79 1730 EDT Bedford,New Hampshire
33.86 MHz KDR 792 "Mt. Sterling FD" FD

Base 10-8-79 1508 PDT MT. Sterling,Ohio
33.98 MHz KZO 424 "Adamsville FD" FD

Base 10-16-79 1853 EDT Adamsville,Ohio
33.94 MHz KAT 790 "Windsor TWP FD" FD

Base 10-16-79 1556 PDT Diamondale,Michigan
33.96 MHz KMJ 961 "KMJ 961" FD

Base 10-16-79 1530 EDT McHenry (Garrett Co.),Maryland
33.88 MHz KEE 873 "KEE 873" FD

Base 10-16-79 1430 PDT Salem County,N.J.
33.80 MHz KQG 676 "KQG 676" FD

Base 10-16-79 1731 EDT Hagerstown (Washington Co.),Maryland
33.70 MHz KDP 403 "KDP 403" FD

Base 10-15-79 1456 PDT Little Valley (Cattaguarus Co.),N.Y.
33.80 MHz KCD 346 "KCD 346" FD

Base 10-15-79 1740 EDT Tolland,CT.
33.98 MHz KQN 950 "Middlesex" FD

Base 10-15-79 1313 PDT Urbanna,Virginia
33.82 MHz KVM 303 "Nimishillen TWP" FD

Base 10-16-79 1452 PDT Louisville (Stark Co.),Ohio
33.60 MHz KYF 355 "Winchester" FD

Base 10-15-79 1345 PDT Winchester,Conn.
33.70 MHz KUE 698 "KUE 698" FD

Base 10-15-79 1506 PDT Eagleville (Montgomery Co.),PA.
33.86 MHz KBP 769 "Hamilton TWP" FD

Base 10-14-79 1638 PDT Obets,Ohio
33.82 MHz KCX 393 "Culpepper" FD

Base 10-14-79 1529 PDT Culpepper,Virginia
33.90 MHz KQI 316 "Hamilton Co." FD

Base 10-14-79 1816 EDT Cincinnati,Ohio
(Editor's Note: A LOT of RCMA members had stated this is one of the most consistant skip stations to be received on the west coast.)
33.72 MHz KQA 216 "Cleveland" FD

Base 10-14-79 1532 PDT Cleveland,Ohio
33.74 MHz KMK 387 "KMK 387" FD

Base 10-12-79 1855 EDT Valley Forge,Tenn.
33.94 MHz KVN 531 "KVA 531" FD

Base 10-12-79 1042 PDT Harvey,Louisiana
33.86 MHz KQH 904 "KQH 904 Licking Co. Fire"

Base 10-12-79 1602 EDT Newark (Licking Co.),Ohio
33.74 MHz KQA 880 "KQA 880" FD

Base 10-12-79 1543 PDT Akron,Ohio
33.78 MHz KGC 524 "KGC 524" FD

Base 10-12-79 1300 PDT Dover,Delaware
33.94 MHz KKZ 332 "KKZ 332" FD

Base 10-10-79 1512 PDT Westwego,Louisiana
33.86 MHz KQH 940 "KQH 940" FD

Base 10-11-79 1642 PDT Mt. Vernon (Knox Co.),Ohio

LOW BAND SKIP (CONTINUED)

MIKE (CA-RI-011) (Continued):

			33.86 MHz	KJP 275	"Norwich TWP" FD
Base	10-11-79	1456 PDT	Hilliard,Ohio		
		33.82 MHz	KDQ 223	"East Brunswick"	FD
Base	10-11-79	1925 EDT	East Brunswick,N.J.		
		33.94 MHz	KBT 927	"Central"	FD
Base	10-8-79	2000 EDT	Charlotte (Mecklenburg Co.),N.C.		
		33.82 MHz	KLO 327	"KLO 327	FD
Base	10-8-79	1756 EDT	Goochland,Virginia		
		33.78 MHz	KGE 998	"KGE 998 Gilhall Base"	FD
Base	10-11-79	1910 EDT	Gilhall,PA.		
		33.94 MHz	KCD 472	"Windsor Locks Base"	FD
Base	10-8-79	1820 EDT	Windsor Locks,Conn.		
		33.70 MHz	KCH 954	"North Branford FD"	FD
Base	10-7-79	1641 EDT	North Branford,Conn.		
		33.76 MHz	KCW 472	"Moon Base"	FD
Base	10-8-79	1146 PDT	Moon Township,PA.		
		33.94 MHz	KJJ 465	"Pottersville FD"	FD
Base	10-7-79	1830 EDT	Pottersville,N.J.		
		33.82 MHz	KGH 277	"KGH 277"	FD
Base	10-7-79	1506 PDT	Lancaster,PA.		

(Mike uses both a Bearcat 220 and Regency Touch receivers.)

Well, this is the largest column to date. Mike above sent 24 full pages of good loggings from nearly all over the east and south. It was very hard to ascertain which I felt (or even Mike) were the best to put in this column.

Remember,that logging forms can be had for a SASE. Please note how many you desire,and they will be shipped to you ASAP.

Hope you all had a happy Christmas season and that you got that "dream" receiver or accessory you wanted for your listening post. And by now most of the upper sections of the country probably is under a blanket of that white,fluffy stuff. All I can say is...hope you enjoy listening to the road crews on that scanner! Until next month, 73s.

MARKETPLACE

Members may advertise, free of charge, items wanted, items for sale and items for trade that are associated with the hobby of monitor radio listening above 30 MHz. No dealer ads accepted. Send to: Larry H. Brown, 1717 Leith St., Flint, MI 48506.

FOR SALE: Regency K-100 scanner, like new and still under warranty. $220.00 cash or mail order, no personal checks accepted. Will ship via UPS anywhere in continental USA. Jerry Callain (OH-015), 104 Maplewood, Mt. Vernon, Ohio 43050. Phone: (614) 397-3520.

WANTED: Any information regarding the SBE OPTI-SCAN such as technical manual, schematic diagrams, alignment repair info, copies, etc. and a used Bearcat 210 in any condition. Charles J. Sterer (MN-008), 2910 E. Franklin Ave., Minneapolis, Minnesota 55406.

FOR SALE: New Regency K-100 digital crystaless scanner, still in box. $199.00 includes shipping. Charles J. Sterer (MN-008), 2910 E. Franklin Ave., Minneapolis, Minnesota 55406.

FOR SALE: Regency 8 channel UHF scanner with AC & DC cords; $80.00. UHF Cop Scan Fanon-Courier hand held 4 channel unit with charger, adapter, and leather carrying case; $70.00. Many crystals, 39 MHz, 42 MHz, 153-155 MHz, and 400 MHz ranges. Mainly So. California area, L.A. County Sheriff, LBPD, paramedics and fire. Send your needs or for list; $2.50 each. Denny Heins (IA-005), Box 169, Spencer, Iowa 51301. Phone: (712) 262-7892. All prices include shipping costs.

FOR SALE: Regency Touch ACT-T-16K, serial number 237-A00 753. This scanner is in excellent condition and the reason for selling is that I purchased the Bearcat 250, which is more up to date. $200.00. Arnold L. Salmon, Route 1, Box 119, Canova, South Dakota 57321

FOR SALE: AN/URR-35C 225-400 MHz tunable and crystal controlled aircraft receiver complete with manual. Unit operates on 110V AC. $75.00 plus shipping. Robert A. Coburn, RFD-4, Tinkham Lane, Londonderry, New Hampshire 03053. Phone: (603) 432-2615.

FOR SALE: SBE Optiscan (12M model), 20 cards, AC & DC cords, the two antennas that come with the set, program book and program info that extends the factory programming. $200. BILL BRINKLEY, 508 Crest View #356, Belmont, CA 94002.

TRADE: Would like to trade a Realistic crystal PRO-14, 10 ch VHF-UHF scanner for a pocket scanner. DAN REESE, 736 Penny Royal Lane, San Rafael, CA 94903, (415)-479-4460 between 5 and 9 PM California time.

WANTED: Realistic PRO-9 in good to excellent condition. MICHAEL W. SCHEEL, 3403 Jersey Ridge #224, Davenport, IA 52807.

Marketplace (continued)

FOR SALE: Bearcat Four-Six, $140, no crystals and a Craig 4352 UHF pocket scanner, $50, no crystals. Will trade both for Bearcat Thin-Scan VHF Hi and UHF. MICHAEL W. SCHEEL, 3403 Jersey Ridge #224, Davenport, IA 52807.

WANTED: "Police Telecommunications Systems", GPO. MICHAEL W. SCHEEL, 3403 Jersey Ridge #224, Davenport, IA 52807

contact/info wanted

The purpose of this column is twofold: 1) CONTACT --- It helps members to contact other members. If you want to meet, telephone or correspond with other members (by letter or cassette tape) in a certain geographic area or with members who have similar listening interests, this is the place to say so. 2) INFO WANTED --- This column helps members to obtain information directly from other members on various subjects related to two-way communications monitoring above 30 MHz.

Members who wish to contact you will do so directly, so be sure to give your phone number and best time to call and/or your address. Write to: Larry H. Brown, 1717 Leith St., Flint, MI 48506.

Wish to contact owners of Regency R-106's. Especially interested in those who have had factory modification done for 406-420 MHz band coverage and those who are utilizing unit in motor vehicle coupled to standard broadcast antenna. TONY LOVING, 393 Grove St., Ridgewood, NJ 07450, (201)-652-5252 evenings or (201)-325-6801 days.

I would like to hear from anyone having interest in frequencies in Ohio, specifically the Akron, Canton, Massillon area. Call any time day or night or write. BILL BAUS, 117 Edwin S.E., Massillon, OH 44646, (216)-833-8643.

I would like to receive cassette tapes with fire traffic from large cities. Would also like LA County and Orange County. I will pay for the tapes or will swap for tapes that I have. Will also copy and return yours if preferred. RICHARD DORE, 122 Washington St., Brewer, ME 04412.

Jerry (OH-015) has extensive frequency files for Ohio and is willing to help other members with Ohio frequencies. He in turn is trying to compile a list of unlisted frequencies in Ohio, mostly in government areas. JERRY CALLAM, 104 Maplewood, Mt. Vernon, OH 43050.

Eddie would like to help start a New York Chapter or help organize get-togethers for New York members. EDDIE MURO, 737 Golf Dr., North Woodmere, NY 11581.

I would like to get in touch with members in the Quad-Cities area. I work strange hours so send a postcard or a letter and I will figure out my days off and contact you. MICHAEL W. SCHEEL, 3403 Jersey Ridge #224, Davenport, IA 52807.

If any New England members are interested in starting to have our own meetings like Oregon and Illinois, please contact me immediately with your phone number. RICHARD BARNETT, P.O. Box 428, Newton Highlands, MA 02161.

Miscellany

RCMA, P.O. Box 4693,
Riverside, CA 92514

From RICK (NJ-001):

Living on the East Coast, we are not accustomed to having movies made in our backyard. So when a local newspaper had an article about Woody Allen's new as-yet-untitled movie being made in New Jersey, we read it with more than a passing interest. First, I had never seen a major motion picture in production and second, the area in which the filming was to take place is at the North Jersey Seashore - an area dear to my heart. I also remembered that when movies were being shot in New York City, HT's are used by members of the production crew. Aha, I thought, here's a way to satisfy all three of my interests at one time.

With all this in mind, Dana and I headed off to the Shore on Thursday morning with my Bearcat 250 installed in the car and buzzing away happily. We stopped for lunch in the shore area and then proceeded to look for the movie makers in a small area called Ocean Grove - a Methodist camping ground on the ocean, near Asbury Park. (Some of you may have read about this area because of recent litigation concerning certain Sunday bans and the constitutionality of the same.) We parked at the square near the auditorium where the shooting was to take place only to find that the morning's work was being done in Belmar, a town a few miles to the south, and our usual summer's haunt.

We walked around the square, admiring a 1951 Rolls-Royce which we found out was to be used in the film. Suddenly there was a flurry of activity as members of the production crew began to prepare the area for filming. The cast was coming back.

In the middle of all this was a man with a HT with a short antenna. As he walked past I asked him if his unit was a UHF (my first guess) or VHF unit. He looked at the radio and said UHF and then pulled the unit out of the holder and said, "It's FM." I asked if he knew the frequency and we examined the radio and found the numbers 461.500 and 466.500 on the back. I was elated. I walked back to the car to change jackets since it had now cooled off a bit and also plugged these frequencies into the Bearcat. Voila! positive results. We watched the rehearsal and the 4 takes of the shot and the work was finished for the day. As the crew began to wrap up I noticed another HT with a longer antenna and again approached the same individual who again thought I must be some kind of nut. Again we looked at the radio but this one had no markings.

A note to all you Los Angelinos - 461.500 is listed as an IB (Business) frequency. There is no guarantee that this frequency is being used on movie locations other than this one but it is a good place to start to search out active frequencies in your area. For us, well we'll go back again on another day. I know my kids will enjoy seeing a movie being made, and me, I want another crack at that other frequency.

NEW MEMBERS

AL-	Jerry Prestwood, RR 2, Box 256, Daleville, AL 36322
AZ-	William D. Polhemus, 1731 East First St., Mesa, AZ 85203
CA-AL-012	Joe Bulger, 2000 Center St., Box 1316, Berkeley, CA 94704
CA-AL-	Shawn M. Gordon, 38665 Blacow Rd., Fremont, CA 94536
CA-KE-003	Bruce D. Johansen, 619 Weiman, Ridgecrest, CA 93555
CA-LA-230	C. V. Brennan, 2238 Ximeno Ave., Long Beach, CA 90815
CA-LA-	M. G. Van Ackere, 2118 W. 166th Pl., Torrance, CA 90504
CA-LA-	Gilbert, Monterey Park, CA
CA-LA-	Jon L. Duckworth, 1327 North Lamer St., Burbank, CA 91506
CA-LA-	Robert Allessi, 4216 West 154th St., Lawndale, CA 90260
CA-MA-001	Terrence R. Sammon, 39344 Highview Dr., Oakhurst, CA 93644
CA-RI-023	Robert L. Elliott, Drawer B, Eagle Mountain, CA 92241
CA-SJ-	Larry R. Cote, 2052 Osford Way, Stockton, CA 95204
CA-VE-011	Craig J. Thompson, 14 W. McAfee Ct. #36, Thousand Oaks, CA 91360
FL-	Scott Glicker, 9326 NW 19th Pl., Sunrise, FL 33322
FL-	J. Rodriguez, FL
FL-	Capt. R. A. Serenberg, Jr., 452 Hermosita - Vina Del Mar, St. Petersburg Beach, FL 33706
GA-	James Michael Crenshaw, 1007 Juniper St., La Grange, GA 30240
IL-065	Gregory B. Bishop, 6250 N. Lenox Ave., Chicago, IL 60646
IL-066	James J. Evans, 5617 N. Neva Ave., Chicago, IL 60631
IL-	Fred Peaslee, 15 N. Channing St., Elgin, IL 60120
IL-	Kenneth P. Frey, P.O. Box 521, Carbondale, IL 62901
IN-016	David P. Warholak, P.O. Box 1887, Indianapolis, IN 46206
IN-	Paul T. McCowan, 2000 Mary Lee Dr., New Albany, IN 47150
IN-	George, Gary, IN
KY-	Mike Bailey, 209 Dell Dr., Hopkinsville, KY 42240
MD-	John M. Frostbutter, 2521 Silver Way, Gambrills, MD 21054
ME-008	Kenneth R. Mitchell, Jr., P.O. Box 516, Palm Bay, FL 32905 (11/1-5/1) " " P.O. Box 497, Kennebunkport, ME 04046 (5/1-11/1)
MI-	Randall Zagata, 21924 Gaukler, St. Clair Shores, MI 48080
MS-003	Wm. A. Jones, 106½ N. 38th Ave., Hattiesburg, MS 39401
NC-	James Clarence Tilley, 312 North 1st Ave., Mayodan, NC 27027
NY-070	Phil Walters, 201st ASA Co, Box 1816, APO NY 09178
OH-031	Norman Fink, 43 High St., Fredericktown, OH 43019
OH-	John W. Zumbrunn, 4642 4th St. N.W., Canton, OH 44708
PA-037	Gary I. Shuey, R.D. 6, Box 540, Carlisle, PA 17013
PA-038	David Hirchak, 945 Jennings St., Bethlehem, PA 18017
RI-	John, Pawtucket, RI
SC-	Albert Earnhardt, 1 Curtiswood Ave., Sumter, SC 29150
TN-003	Raymond P. McMillin, 2643 Western Hills Dr., Nashville, TN 37214
TX-	Ronnie Whitten, Route 6-Box 10, Killeen, TX 76541
VA-	Thomas Coate, 2251 Pimmit Dr., Apt. 213, Falls Church, VA 22043
WA-	A. L. Birch, N5403 Maple St., Spokane, WA 99208
WV-003	Anthony P. Peretti, P.O. Box 7, Northfork, WV 24868
WV-004	Earl Fowler, Box 255, Stollings, WV 25646
WV-	Alfred L. Folden, Box 169, Lewisburg, WV 24801
WV-	Randy L. Frazier, Box 247, Kimball, WV 24853
CAN-026	Conrad , New Brunswick, Canada
CAN-027	David R. Thurlborn, Apt. 406 - 1124 Esquimalt Rd., Victoria, B.C. Canada V9A 3N4

Note: The reason some members do not have membership numbers listed is that they are very new members and numbers have not yet been assigned. Each member can find his/her number on his/her first computer printed mailing label.

As of December 18, 1979,
RCMA had 1134 members in 48 states and 6 foreign countries

ALABAMA	4	MAINE	8	PENNSYLVANIA	37
ALASKA	2	MARYLAND	16	RHODE ISLAND	4
ARIZONA	11	MASSACHUSETTS	26	SOUTH CAROLINA	6
ARKANSAS	3	MICHIGAN	24	SOUTH DAKOTA	1
CALIFORNIA	490	MINNESOTA	11	TENNESSEE	3
COLORADO	7	MISSISSIPPI	3	TEXAS	29
CONNECTICUT	19	MISSOURI	11	UTAH	2
DELAWARE	4	MONTANA	1	VERMONT	1
DC	1	NEBRASKA	2	VIRGINIA	17
FLORIDA	34	NEVADA	2	WASHINGTON	12
GEORGIA	12	NEW HAMPSHIRE	7	WEST VIRGINIA	6
HAWAII	0	NEW JERSEY	31	WISCONSIN	14
IDAHO	1	NEW MEXICO	0	WYOMING	3
ILLINOIS	68	NEW YORK	67		
INDIANA	17	NORTH CAROLINA	9	BERMUDA	1
IOWA	9	NORTH DAKOTA	1	CANADA	26
KANSAS	6	OHIO	31	ENGLAND	1
KENTUCKY	4	OKLAHOMA	8	ICELAND	1
LOUISIANA	6	OREGON	12	NETH. ANTILLES	1
				SAUDI ARABIA	1

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FOR YOUR INFORMATION

1. All club business, unless otherwise noted, must be addressed to: RCMA, P.O. Box 4563, Anaheim, CA 92803. This includes matters that relate to renewals, changes of address, Newsletter delivery problems, etc.
2. Input to the RCMA Newsletter must be mailed to the proper editors whose addresses are included in the column headings. If in doubt or if no particular column seems to be appropriate, send it to: RCMA, P.O. Box 4693, Riverside, CA 92514. Please do not include matters of club business.
3. RCMA Newsletter back issues (reprints) are no longer being offered for sale to members.
4. To forward a letter to a specific RCMA member whose address you do not know, put your message to that person in a stamped envelope with your return address in the upper left corner. Put this and your instructions for remailing in another envelope and mail to: RCMA, P.O. Box 408, Earp, CA 92242.
5. It would be appreciated if you would include your RCMA membership number with all correspondence to the Newsletter Editors or to Headquarters.
6. If you require a reply when writing to RCMA Headquarters or one of the Editors you MUST include a self-addressed stamped envelope.
7. Please write only on one side of the paper.
8. Please do not combine in one letter items that should go to different addresses.
9. If you are inclined to type what you submit to the Newsletter, please do not exceed a 6¼ inch column width and please single-space. Doing this may save an editor from having to retype the material. Please do not use *"script"* type.
10. Your RCMA membership number and expiration date appear on your Newsletter mailing label.
11. Your copy of the Newsletter should arrive between the 2nd and 3rd Friday of the month for which it is dated.

The RCMA Newsletter is published monthly by the members of the RADIO COMMUNICATIONS MONITORING ASSOCIATION, P.O. Box 4563, Anaheim, CA 92803. Subscription rate/membership fee is $8.00 per year for U.S. residents and $10.35 (U.S.) for persons in all other countries (dues subject to change).
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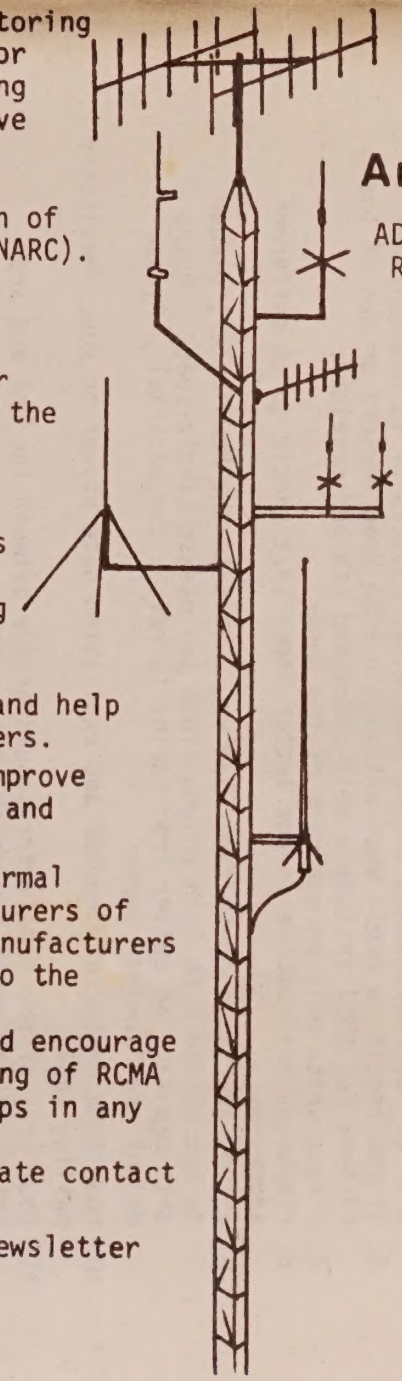
The Radio Communications Monitoring Association is a radio club for persons interested in listening to two-way communications above 30 MHz as a hobby. RCMA was founded in May 1975 and is a Full Member of the Association of North American Radio Clubs (ANARC).

The goals of RCMA are:

1) To provide a fraternity for those who seriously pursue the hobby of monitor radio listening.
2) To try to be knowledgeable about two-way radio systems and operations.
3) To promote an understanding of the legal and ethical uses of monitor receivers.
4) To share information with and help other monitor radio listeners.
5) To try to understand and improve receivers, antenna systems and related equipment.
6) To offer suggestions and formal recommendations to manufacturers of monitor receivers and to manufacturers of other products related to the hobby.
7) To offer suggestions for and encourage the organizing and conducting of RCMA meetings and tours for groups in any geographic area.
8) To encourage and to facilitate contact between members.
9) To publish a regular club newsletter devoted to the hobby.



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